10/816,659

INVENTOR SEARCH

=> fil capl; d que l36; fil wpix; d que l61; fil JICST-EPLUS, BIOTECHNO, BIOSIS, JAPIO, BIOENG, CEABA-VTB; d que l18
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FILE COVERS 1907 - 25 Oct 2006 VOL 145 ISS 18
FILE LAST UPDATED: 24 Oct 2006 (20061024/ED)

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'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L34 (126)SEA FILE=CAPLUS ABB=ON RAMSAY C?/AU
L35 (833)SEA FILE=CAPLUS ABB=ON SIMPSON W?/AU
L36 2 SEA FILE=CAPLUS ABB=ON L34 AND L35

FILE 'WPIX' ENTERED AT 10:14:09 ON 25 OCT 2006

FILE LAST UPDATED: 23 OCT 2006 <20061023/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE: 200668 <200668/DW>
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http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf

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L59 (        16)SEA FILE=WPIX ABB=ON  RAMSAY C?/AU
L60 (       160)SEA FILE=WPIX ABB=ON  SIMPSON W?/AU
L61           2 SEA FILE=WPIX ABB=ON  L59 AND L60



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L1          164 SEA RAMSAY C?/AU
L2          665 SEA SIMPSON W?/AU
L18           2 SEA L1 AND L2


=> dup rem l36,l18,l61
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PROCESSING COMPLETED FOR L36
PROCESSING COMPLETED FOR L18
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PROCESSING COMPLETED FOR L61
L97 3 DUP REM L36 L18 L61 (3 DUPLICATES REMOVED)
ANSWERS '1-2' FROM FILE CAPLUS
ANSWER '3' FROM FILE WPIX

=> d ibib ed abs 1-3

L97 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:259726 CAPLUS Full-text
DOCUMENT NUMBER: 138:268004
TITLE: Device for use in monitoring swab technique
INVENTOR(S): **Ramsay, Catherine Mary; Simpson, William John**
PATENT ASSIGNEE(S): Biotrace Limited, UK
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1298069	A2	20030402	EP 2002-256712	20020926
EP 1298069	A3	20040204		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005221471	A1	20051006	US 2004-816659	20040401
PRIORITY APPLN. INFO.:			GB 2001-23151 A	20010926

ED Entered STN: 04 Apr 2003
AB A device for use in monitoring a swab method, the device includes a first substrate substantially adjacent a second substrate, the first substrate and the second substrate having disposed there between a test material.

L97 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:969075 CAPLUS Full-text
DOCUMENT NUMBER: 138:169150
TITLE: A method of detecting autolysis of brewers' yeast by measurement of extracellular adenylate kinase activity
AUTHOR(S): Driscoll, M.; **Ramsay, C. M.**; Hulse, G.; **Simpson, W. J.**
CORPORATE SOURCE: Biotrace Ltd., Bridgend, UK
SOURCE: Journal of the American Society of Brewing Chemists (2002), 60(4), 176-180
CODEN: JSBCD3; ISSN: 0361-0470
PUBLISHER: American Society of Brewing Chemists, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 23 Dec 2002
AB We have developed an assay for monitoring cell leakage and autolysis in yeast slurries. Adenylate kinase (AK; EC 2.7.4.3, ATP:AMP phosphotransferase) catalyzes the reaction: 2ADP .dblarw.ATP + AMP. The ATP produced in this reaction can be measured with high sensitivity and precision by using the firefly luciferase reaction. AK is a constitutively expressed intracellular enzyme, which is not secreted or excreted by healthy yeast cells; therefore, it serves as a useful marker for autolysis. The test is capable of detecting the AK content of single yeast cells and has a dynamic range of more than five decades. Dilution of the sample extends the dynamic range still further. We applied the method to yeast cultures from several breweries in Europe and

Africa. We found a correlation between the yeast storage time and temperature and the general physiol. condition of the cultures. Healthy yeast cells had low levels of extracellular AK activity (typically <60 units of AK). Older or badly stored cultures released more AK into the surrounding beer. Older cultures could show as high as 500 units of AK; incorrectly stored cultures ranged from 3,000 to 60,000 units. This new method is useful for routine monitoring of yeast leakage and autolysis and should assist breweries seeking to optimize beer foam quality and yeast activity.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L97 ANSWER 3 OF 3 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-722703 [74] WPIX
DOC. NO. CPI: C2005-220009 [74]
TITLE: Device, useful for monitoring a swab method in an ATP assay and protein-based hygiene test, comprises a first substrate adjacent to a second substrate, where the first and second substrate are disposed between a test material
DERWENT CLASS: A89; B04; D16; D22
INVENTOR: **RAMSAY C M; SIMPSON W J**
PATENT ASSIGNEE: (RAMS-I) RAMSAY C M; (SIMP-I) SIMPSON W J
COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20050221471	A1	20051006	(200574)*	EN	6	[2]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20050221471	A1	US 2004-816659	20040401

PRIORITY APPLN. INFO: US 2004-816659 20040401
ED 20060125
AN 2005-722703 [74] WPIX
AB US 20050221471 A1 UPAB: 20060125
NOVELTY - Device (I), for monitoring a swab method, comprises a first substrate adjacent to a second substrate, where the first and second substrates are disposed between a test material.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) manufacturing (I) comprising providing a first substrate, applying a test material to a portion of the first substrate, covering at least the test material on the first substrate with a second substrate and joining the second substrate to the first substrate so as to encapsulate the test material between the first substrate and the second substrate; and
(2) monitoring a swab technique comprising providing (I), swabbing the test material with a swab and monitoring the amount of analyte present on the swab.
USE - (I) is useful for monitoring the swab method in an ATP assay and protein-based hygiene test (claimed).
ADVANTAGE - (I) reduces (preferably inhibit) the contamination of the material to be tested (claimed). (I) provides accurate measurements and results.

TEXT SEARCH

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=> fil capl; d que l42; d que l48; d que l53; d que l58
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FILE LAST UPDATED: 24 Oct 2006  (20061024/ED)

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L37 (     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L38 (        99)SEA FILE=CAPLUS ABB=ON  L37(L)HYDROPHILIC/OBI
L39 (       164)SEA FILE=CAPLUS ABB=ON  L37(L)HYDROPHOBIC/OBI
L40 (        43)SEA FILE=CAPLUS ABB=ON  L38 AND L39
L41 (    753213)SEA FILE=CAPLUS ABB=ON  9/SC,SX
L42           9 SEA FILE=CAPLUS ABB=ON  L40 AND L41



L43 (     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L44 (        99)SEA FILE=CAPLUS ABB=ON  L43(L)HYDROPHILIC/OBI
L45 (       164)SEA FILE=CAPLUS ABB=ON  L43(L)HYDROPHOBIC/OBI
L46 (        43)SEA FILE=CAPLUS ABB=ON  L44 AND L45
L47 (    293644)SEA FILE=CAPLUS ABB=ON  APPARATUS/CW
L48           5 SEA FILE=CAPLUS ABB=ON  L46 AND L47



L49 (     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L50 (        99)SEA FILE=CAPLUS ABB=ON  L49(L)HYDROPHILIC/OBI
L51 (       164)SEA FILE=CAPLUS ABB=ON  L49(L)HYDROPHOBIC/OBI
L52 (        43)SEA FILE=CAPLUS ABB=ON  L50 AND L51
L53           6 SEA FILE=CAPLUS ABB=ON  DEV/RL AND L52



L54 (     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L55 (        99)SEA FILE=CAPLUS ABB=ON  L54(L)HYDROPHILIC/OBI
L56 (       164)SEA FILE=CAPLUS ABB=ON  L54(L)HYDROPHOBIC/OBI
L57 (        43)SEA FILE=CAPLUS ABB=ON  L55 AND L56
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L58             7 SEA FILE=CAPLUS ABB=ON  L57 AND ANST/RL


=> s l42,l48,l53,l58 not l36

L98          10 (L42 OR L48 OR L53 OR L58) NOT L36

=> fil wpix

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MOST RECENT THOMSON SCIENTIFIC UPDATE:     200668      <200668/DW>
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'BI ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d que l67; d que l75; d que l83; d que l88; d que l96

L62 (      5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L63 (      4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L64 (     49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR
                C11-C09 OR B11-C OR C11-C)/MC
L65 (     30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L66 (     35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L67          10 SEA FILE=WPIX ABB=ON  L62 AND L63 AND L64 AND (L65 OR L66)
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L68 (      5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L69 (      4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L70 (     49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR
                C11-C09 OR B11-C OR C11-C)/MC
L71 (     30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L72 (     35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L73 (        66)SEA FILE=WPIX ABB=ON  L68 AND L69 AND (L70 OR L71 OR L72)
L74 (    453199)SEA FILE=WPIX ABB=ON  ALUMINUM/BI,ABEX OR ALUMINIUM/BI,ABEX
L75            4 SEA FILE=WPIX ABB=ON  L73 AND L74



L76 (      5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L77 (      4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L78 (     49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR
                C11-C09 OR B11-C OR C11-C)/MC
L79 (     30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L80 (     35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L81 (        66)SEA FILE=WPIX ABB=ON  L76 AND L77 AND (L78 OR L79 OR L80)
L82 (     74012)SEA FILE=WPIX ABB=ON  QUAT?/BI,ABEX(2A)AMMONIUM/BI,ABEX OR
                BENZETHONIUM/BI,ABEX OR CHLORHEXIDINE/BI,ABEX OR BIGUANIDE/BI,A
                BEX OR GLYCEROL/BI,ABEX OR BENZALKONIUM/BI,ABEX
L83            1 SEA FILE=WPIX ABB=ON  L81 AND L82



L84 (      5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L85 (      4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX

L86 (      2367)SEA FILE=WPIX ABB=ON  SWAB?/BI,ABEX
L87 (     10860)SEA FILE=WPIX ABB=ON  POUCH/BI,ABEX
L88            2 SEA FILE=WPIX ABB=ON  L84 AND L85 AND (L87 OR L86)



L89 (     49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR
                C11-C09 OR B11-C OR C11-C)/MC
L90 (     30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L91 (     35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L92 (     10860)SEA FILE=WPIX ABB=ON  POUCH/BI,ABEX
L93 (   1034621)SEA FILE=WPIX ABB=ON  (FIRST/BI,ABEX (P) SECOND/BI,ABEX) OR
                (1ST/BI,ABEX (P) 2ND/BI,ABEX)
L94 (   4150809)SEA FILE=WPIX ABB=ON  DEVICE#/BI,ABEX OR APPARATUS/BI,ABEX
L95 (       438)SEA FILE=WPIX ABB=ON  L93 AND L94 AND L92
L96            2 SEA FILE=WPIX ABB=ON  L95 AND L89 AND (L90 OR L91)


=> s l67,l75,l83,l88,l96 not l61

L99           12 (L67 OR L75 OR L83 OR L88 OR L96) NOT L61

=> fil JICST-EPLUS, BIOTECHNO, BIOSIS, JAPIO, BIOENG, CEABA-VTB

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=> d que l20; d que l22; d que l32; d que l23

L3          4725 SEA HYDROPHILIC(3A) SURFACE#
L4          6419 SEA HYDROPHOBIC(3A) SURFACE#
L6        929947 SEA (FIRST(P) SECOND) OR (1ST(P) 2ND)
L7       1004224 SEA SUBSTRATE#
L8         21540 SEA ANALYTE#
L20            6 SEA L3 AND L4 AND L6 AND (L7 OR L8)



L3          4725 SEA HYDROPHILIC(3A) SURFACE#
L4          6419 SEA HYDROPHOBIC(3A) SURFACE#
L9         15346 SEA POUCH OR SACHET
L10       311020 SEA SEAL###
L11          402 SEA (COEXTRU? OR CO EXTRU?)(2A) LAMINAT?
L19      3788993 SEA DEVICE# OR APPARATUS
L22            0 SEA L3 AND L4 AND L19 AND (L9 OR L10 OR L11)



L14        44903 SEA (BENZALKONIUM OR BENZETHONIUM)(W) CHLORIDE OR CHLORHEXIDINE
                 OR QUAT?(2A) AMMONIUM
L15        60910 SEA GLYCEROL
L16       142814 SEA ALBUMIN
L17       196121 SEA ATP OR ADENOSINE TRIPHOSPHATE
L32            0 SEA L15 AND L14 AND L16 AND L17



L6        929947 SEA (FIRST(P) SECOND) OR (1ST(P) 2ND)
L7       1004224 SEA SUBSTRATE#
L8         21540 SEA ANALYTE#
L9         15346 SEA POUCH OR SACHET
L19      3788993 SEA DEVICE# OR APPARATUS
L23            3 SEA L19 AND L9 AND L6 AND (L7 OR L8)


=> s l20,l23 not l18

L100           9 (L20 OR L23) NOT L18

=> => dup rem l98,l99,l100
FILE 'CAPLUS' ENTERED AT 10:16:36 ON 25 OCT 2006
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FILE 'WPIX' ENTERED AT 10:16:36 ON 25 OCT 2006

FILE 'JICST-EPLUS' ENTERED AT 10:16:36 ON 25 OCT 2006

FILE 'BIOSIS' ENTERED AT 10:16:36 ON 25 OCT 2006

FILE 'JAPIO' ENTERED AT 10:16:36 ON 25 OCT 2006

FILE 'BIOENG' ENTERED AT 10:16:36 ON 25 OCT 2006

PROCESSING COMPLETED FOR L98
PROCESSING COMPLETED FOR L99
PROCESSING COMPLETED FOR L100
L101 30 DUP REM L98 L99 L100 (1 DUPLICATE REMOVED)
ANSWERS '1-10' FROM FILE CAPLUS
ANSWERS '11-22' FROM FILE WPIX
ANSWER '23' FROM FILE JICST-EPLUS
ANSWERS '24-28' FROM FILE BIOSIS
ANSWERS '29-30' FROM FILE JAPIO

=> d ibib ed abs hitind 1-10; d iall abeq tech 11-22; d iall 23-30; fil hom

L101 ANSWER 1 OF 30 CAPLUS
ACCESSION NUMBER: 2005:347273 CAPLUS Full-text
DOCUMENT NUMBER: 142:388690
TITLE: Analysis methods using biomarkers concentrated with biomarkers attractant molecules
INVENTOR(S): Mehta, Arpita I.; Liotta, Lance A.; Petricoin, Emmanuel F., III
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005036180	A1	20050421	WO 2004-US33305	20041008

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-509782P P 20031008

ED Entered STN: 22 Apr 2005

AB A method for discovering biomarkers by examining the mols. that adhere to and are concentrated by larger biomarker attractant mols. is disclosed. Also disclosed is a method for diagnosing biol. states based on biomarkers bound to one or more biomarker attractant mols. obtained from one or more biol. fluids. In a particular embodiment, mols. bound to high abundance proteins with a mol. weight above the kidney filtration cutoff (about 45 kDa) are collected from serum and compared between groups of subjects to detect biomarkers. In another embodiment, artificial materials such as nanoparticles are introduced into the bloodstream of different groups of subjects and allowed to harvest smaller mols. The harvested mols. may then be compared between the groups to detect new biomarkers. Once discovered, biomarkers that bind to one or more particular biomarker attractant mols. may be used to provide a diagnosis.

IC ICM G01N033-68
ICS G01N033-574

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 1, 4, 14

IT **Surface**
(**Hydrophilic**; anal. methods using biomarkers concentrated with biomarkers attractant mols.)

IT **Surface**
(**Hydrophobic**; anal. methods using biomarkers concentrated with biomarkers attractant mols.)

IT Carbohydrates, analysis
Lipids, analysis
Nucleic acids
RL: ANT (Analyte); DGN (Diagnostic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(anal. methods using biomarkers concentrated with biomarkers attractant mols.)

IT Proteins
RL: ANT (Analyte); DGN (Diagnostic use); NUU (Other use, unclassified); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(anal. methods using biomarkers concentrated with biomarkers attractant mols.)

IT Albumins, analysis
RL: ANT (Analyte); **ANST (Analytical study)**
(serum; anal. methods using biomarkers concentrated with biomarkers attractant mols.)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1156534 CAPLUS Full-text
DOCUMENT NUMBER: 142:71153
TITLE: Reactor with memory component
INVENTOR(S): Zarur, Andrey J.; Macgregor, Ian K.; Basque, Todd A.; Rodgers, Seth T.; Russo, A. Peter; Leblanc, Sean J.
PATENT ASSIGNEE(S): Bioprocessors Corp., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004112946	A2	20041229	WO 2004-US18637	20040607
WO 2004112946	A3	20050224		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1628748 A2 20060301 EP 2004-755035 20040607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

PRIORITY APPLN. INFO.: US 2003-457017 A 20030605
US 2003-499124P P 20030829
WO 2004-US18637 W 20040607

ED Entered STN: 30 Dec 2004

AB The present invention provides techniques for conveniently and reliably storing and/or retrieving data associated with a chemical, biol., or biochem. chip, reactor, or reaction system. The data can pertain to the reactor; to chemical, biol., or biochem. species introduced into, taken from, or otherwise associated with the reactor; to conditions to which the reactor and/or some or all of its contents has been, is being, or will be exposed to, or the like. Various aspects of the present invention relate to memory and data storage components suitable for use in chips or other reaction systems. These components may include silicon integrated circuits, magnetic media, optical media, radio-frequency tags, smart cards, bar-codes and other kinds of data storage devices. The chip may contain a reaction site having a volume of less than about 2 mL. In some embodiments, the chip may be constructed in such a way as to be able to support a living cell. The chip may be used for imaging or anal., or the chip may be used to facilitate a chemical or biol. reaction, which may be light-sensitive or light activated in certain cases. Other facilitated reactions may include the production and/or consumption of a chemical or biol. species. In some embodiments, the chip may include more than one component or component type, and/or more than one reaction site.

IC ICM B01F

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 16, 79, 80

IT **Surface**
(**Hydrophilic**; reactor with memory component)

IT **Surface**
(**Hydrophobic**; reactor with memory component)

IT **Apparatus**
(biol., or biochem. chip; reactor with memory component)

IT **Apparatus**
(chemical apparatus; reactor with memory component)

IT **Apparatus**
Bar code labels
Computer application
Deformation (mechanical)
Gamma ray
Heating
Holders
Imaging
Integrated circuits
Interconnections, electric
Laser radiation
Light
Magnetic memory devices

Memory devices
Optical ROM disks
Optical imaging devices
Optical materials
Radio wave
Reaction
Reactors
Rotation
Semiconductor materials
Temperature
UV radiation
Volatility
Volume
(reactor with memory component)

IT Magnetic apparatus
(strip; reactor with memory component)

IT 7440-21-3, Silicon, uses
RL: DEV (Device component use); USES (Uses)
(reactor with memory component)

L101 ANSWER 3 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:430294 CAPLUS Full-text
DOCUMENT NUMBER: 140:402829
TITLE: Microfluidic device
INVENTOR(S): Andersson, Per
PATENT ASSIGNEE(S): Swed.
SOURCE: U.S. Pat. Appl. Publ., 29 pp., Cont.-in-part of U.S. Pat. Appl. 2004 16,879.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004099310	A1	20040527	US 2003-715897	20031118
WO 9958245	A1	19991118	WO 1999-IB907	19990507
W: AU, CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 2002158195	A1	20021031	US 2001-811741	20010319
US 6653625	B2	20031125		
US 2004016879	A1	20040129	US 2003-621868	20030717
US 6812457	B2	20041102		
US 2005279925	A1	20051222	US 2004-867893	20040615
US 2004239234	A1	20041202	US 2004-867910	20040616

PRIORITY APPLN. INFO.:		
WO 1999-IB907	W	19990507
US 2001-674457	A2	20010105
US 2001-811741	A1	20010319
US 2003-621868	A2	20030717
GB 1998-9943	A	19980508

ED Entered STN: 27 May 2004

AB A microfluidic device adapted such that the flow of fluids within the device is controlled by different surfaces of the device having different surface characteristics. Preferably the device comprises a substrate not formed from a hydrated oxide material. The present invention relates to a method for presenting an analyte of a liquid sample as an MS-analyte to a mass spectrometer. More particularly, the method comprises the steps of applying a liquid sample containing the analyte to a sample inlet port of a microchannel

structure of a microfluidic device, said structure also comprising an outlet port (MS-port) that is capable of being interfaced with a mass spectrometer, passing the analyte to the MS-port thereby transforming it to an MS-analyte, and presenting the MS-analyte to mass spectrometer via the MS-port.

IC ICM F16K011-00
INCL 137240000; 137246000; 422103000
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 34, 80
IT **Surface**
(**Hydrophilic**; microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT **Surface**
(**Hydrophobic**; microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT Oxides (inorganic), uses
RL: **DEV (Device component use)**; USES (Uses)
(hydrates; microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT Peptides, analysis
RL: ANT (Analyte); **ANST (Analytical study)**
(microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT Polycarbonates, analysis
Silicone rubber, analysis
RL: ARU (Analytical role, unclassified); **DEV (Device component use)**; **ANST (Analytical study)**; USES (Uses)
(microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT Albumins, analysis
RL: ANT (Analyte); **ANST (Analytical study)**
(serum, tryptic digest; microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT 542-92-7D, 1,3-Cyclopentadiene, polymers with olefins
RL: ARU (Analytical role, unclassified); **DEV (Device component use)**; **ANST (Analytical study)**; USES (Uses)
(Zeonex; microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT 58-82-2, Bradykinin 11128-99-7, Angiotensin II
RL: ANT (Analyte); **ANST (Analytical study)**
(microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT 28166-41-8, α-Cyano-4-hydroxycinnamic acid
RL: ARU (Analytical role, unclassified); **ANST (Analytical study)**
(microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)
IT 7440-47-3, Chromium, analysis 7440-57-5, Gold, analysis
RL: ARU (Analytical role, unclassified); **DEV (Device component use)**; **ANST (Analytical study)**; USES (Uses)
(microfluidic system for energy desorption/ionization mass spectrometry based on compact disk)

L101 ANSWER 4 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:929344 CAPLUS Full-text
DOCUMENT NUMBER: 140:2512
TITLE: Process for producing array plate for biomolecules having hydrophilic and hydrophobic regions
INVENTOR(S): Kim, Woon-Bae; Cho, Chang-Ho; Back, Kae-Dong; Choi, Hwan-Yong
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1364702	A2	20031126	EP 2003-252923	20030509
EP 1364702	A3	20040506		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
KR 2003088782	A	20031120	KR 2002-26730	20020515
CN 1460723	A	20031210	CN 2003-131473	20030515
JP 2004004076	A2	20040108	JP 2003-136789	20030515
JP 3828878	B2	20061004		

PRIORITY APPLN. INFO.: KR 2002-26730 A 20020515
ED Entered STN: 28 Nov 2003
AB A method for manufacturing an array plate for biomols. and a method for manufacturing a biochip using this array plate are provided. The array plate manufacturing method includes: (a) coating a surface of a substrate with a hydrophobic material to form a hydrophobic layer; (b) etching the hydrophobic layer through an etch mask placed thereon to form a hydrophilic binding site; (c) removing the remaining etch mask; and (d) processing the remaining region of the hydrophobic layer to recover its original hydrophobic properties. The biochip manufacturing method includes processing the surface of the hydrophilic binding site of an array plate manufactured using the method, and applying a solution containing biomols. to the surface of the hydrophilic binding site.
IC ICM B01J019-00
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3
IT Polymers, uses
RL: **DEV (Device component use)**; USES (Uses)
(Photosensitive; process for producing array plate for biomols. having hydrophilic and hydrophobic regions)
IT Polyoxyalkylenes, uses
RL: **DEV (Device component use)**; USES (Uses)
(derivs.; process for producing array plate for biomols. having hydrophilic and hydrophobic regions)
IT Polyethers, uses
Polyimides, uses
RL: **DEV (Device component use)**; USES (Uses)
(fluorine-containing; process for producing array plate for biomols. having hydrophilic and hydrophobic regions)
IT Fluoropolymers, uses
RL: **DEV (Device component use)**; USES (Uses)
(polyether-; process for producing array plate for biomols. having hydrophilic and hydrophobic regions)
IT Fluoropolymers, uses
RL: **DEV (Device component use)**; USES (Uses)
(polyimide-; process for producing array plate for biomols. having hydrophilic and hydrophobic regions)
IT Amino group
Ceramics
Coating materials
Coating process
Crosslinking agents
DNA microarray technology
Etching

Etching masks
Evaporation
Gels
Glass substrates
Heating
Hydrophilicity
Hydrophobicity
Magnetic materials
Microarray technology
Photolithography
Photoresists
Protein microarray technology
Reaction
Self-assembled monolayers
Solutions
Surface
Temperature
(process for producing array plate for biomols. having **hydrophilic** and **hydrophobic** regions)

IT DNA
Nucleic acids
Polysaccharides, analysis
Proteins
RL: ANT (Analyte); **ANST (Analytical study)**
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Fluoropolymers, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Fluoropolymers, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Glass, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Metals, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Oxides (inorganic), uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Plastics, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Polyesters, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Polyesters, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Polyoxyalkylenes, uses
RL: **DEV (Device component use)**; USES (Uses)

(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT Polyoxyalkylenes, uses
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

IT 1344-28-1, Alumina, uses 7440-21-3, Silicon, uses 7631-86-9, Silica, uses 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-01-4, Polyacrylic acid 9003-21-8, Polymethyl acrylate 9003-53-6, Polystyrene 9011-14-7, Polymethyl methacrylate 12033-89-5, Siliconnitride, uses 14808-60-7, Quartz, uses 24304-00-5, Aluminum nitride 24979-97-3, Polytetrahydrofuran 25038-59-9, uses 25038-76-0, Polynorbornene 25322-68-3, Polyethylene glycol 25322-68-3D, Polyethylene glycol, derivs. 26809-02-9, Polyacetonitrile 59269-51-1, Polyhydroxystyrene 145771-87-5
RL: **DEV (Device component use)**; USES (Uses)
(process for producing array plate for biomols. having hydrophilic and hydrophobic regions)

L101 ANSWER 5 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:157641 CAPLUS Full-text
DOCUMENT NUMBER: 136:211833
TITLE: Method and apparatus for in situ polynucleotide synthesis on a solid support
INVENTOR(S): Butler, John H.; Brennan, Thomas M.
PATENT ASSIGNEE(S): ProtoGene Laboratories, Inc., USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002016023	A2	20020228	WO 2001-US26041	20010817
WO 2002016023	A3	20021031		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 6589726	B1	20030708	US 2000-645021	20000823
AU 2001086569	A5	20020304	AU 2001-86569	20010817
PRIORITY APPLN. INFO.:			US 2000-645021 A	20000823
			US 1991-754614 B2	19910904
			US 1993-68540 A1	19930527
			US 1995-465761 A1	19950606
			US 1999-314456 A2	19990518
			WO 2001-US26041 W	20010817

ED Entered STN: 01 Mar 2002

AB The present invention relates to methods for fabricating solid supports. More specifically, the present invention features methods for fabricating solid supports for in situ synthesis and for carrying out large nos. of reactions. The present invention also features solid supports with in situ synthesized long polynucleotides.

IC ICM B01J019-00
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9
IT Polysiloxanes, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fluoroalkyl; method and apparatus for in situ polynucleotide synthesis on a
solid support)
IT **Surface**
(**hydrophilic** and **hydrophobic**; method and apparatus for
in situ polynucleotide synthesis on a solid support)
IT **Apparatus**
(ink-jet; method and apparatus for in situ polynucleotide synthesis on a
solid support)
IT Glass, biological studies
RL: BUU (Biological use, unclassified); **DEV (Device component use)**
; BIOL (Biological study); USES (Uses)
(method and apparatus for in situ polynucleotide synthesis on a solid
support)
IT Piezoelectric **apparatus**
(pump; method and apparatus for in situ polynucleotide synthesis on a solid
support)
IT 7803-62-5D, Silane, alkylated 7803-62-5D, Silane, aminoalkyl
7803-62-5D, Silane, hydroxyalkyl
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method and apparatus for in situ polynucleotide synthesis on a solid
support)
IT 7440-21-3, Silicon, biological studies
RL: BUU (Biological use, unclassified); **DEV (Device component use)**
; BIOL (Biological study); USES (Uses)
(method and apparatus for in situ polynucleotide synthesis on a solid
support)

L101 ANSWER 6 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:2142 CAPLUS Full-text
DOCUMENT NUMBER: 134:174536
TITLE: From liposomes to supported, planar bilayer structures on hydrophilic and hydrophobic surfaces: an atomic force microscopy study
AUTHOR(S): Jass, Jana; Tjarnhage, Torbjorn; Puu, Gertrud
CORPORATE SOURCE: Department of Biomedicine, Defense Research Establishment, Umea, SE-901 82, Swed.
SOURCE: Biophysical Journal (2000), 79(6), 3153-3163
CODEN: BIOJAU; ISSN: 0006-3495
PUBLISHER: Biophysical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 02 Jan 2001
AB The sequence of events involved in the transition from attached liposomes to bilayer patches on hydrophilic and hydrophobic solid supports were visualized in situ by Tapping Mode atomic force microscopy in liquid In a smooth manner, the attached liposomes spread and flattened from the outer edges toward the center until the two membrane bilayers were stacked on top of each other. The top bilayer then either rolls or slides over the bottom bilayer, and the adjacent edges join to form a larger membrane patch. This is clearly visible from the apparent height of 6.0-7.5 nm of the single bilayer, measured in situ. The addition of calcium appeared to increase the rate of the processes preventing the visualization of the intermediate stages. The same

intermediate steps appeared to be present on hydrophobic surfaces, although the attached liposomes seemed to be distorted and the resultant membrane edges were uneven. This work has provided visual and detailed information on liposome coalescence (fusion) onto solid supports and demonstrated how the atomic force microscope can be used to study the process.

CC 6-6 (General Biochemistry)
Section cross-reference(s): 9

IT **Surface**
(**hydrophilic, hydrophobic**; atomic force microscopy study of transition of liposomes to planar bilayer structures on **hydrophilic** and **hydrophobic** surfaces)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 7 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:736547 CAPLUS Full-text
DOCUMENT NUMBER: 131:348748
TITLE: Microfluidic device
INVENTOR(S): Larsson, Anders; Allmer, Klas; Andersson, Per
PATENT ASSIGNEE(S): Amersham Pharmacia Biotech AB, Swed.
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9958245	A1	19991118	WO 1999-IB907	19990507
W: AU, CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2333618	AA	19991118	CA 1999-2333618	19990507
AU 9936243	A1	19991129	AU 1999-36243	19990507
AU 753395	B2	20021017		
GB 2341924	A1	20000329	GB 1999-10613	19990507
GB 2350678	A1	20001206	GB 2000-11318	19990507
EP 1077771	A1	20010228	EP 1999-918230	19990507
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, FI				
JP 2003524145	T2	20030812	JP 2000-548085	19990507
US 2004099310	A1	20040527	US 2003-715897	20031118
US 2004202579	A1	20041014	US 2004-834350	20040428
US 2006159592	A1	20060720	US 2005-302713	20051214

PRIORITY APPLN. INFO.:	GB 1998-9943	A	19980508
	GB 1999-10613	A3	19990507
	WO 1999-IB907	W	19990507
	US 2001-674457	A2	20010105
	US 2001-811741	A1	20010319
	US 2003-621868	A2	20030717

ED Entered STN: 19 Nov 1999

AB A microfluidic device adapted such that the flow of fluids within the device is controlled by different surfaces of the device having different surface characteristics. Preferably the device comprises a substrate not formed from a hydrated oxide material.

IC ICM B01L003-00
ICS B01J019-00

CC 9-1 (Biochemical Methods)

IT **Surface**
(**Hydrophilic**; microfluidic device)

IT **Surface**
(**Hydrophobic**; microfluidic device)
IT **Apparatus**
(Microfluidic; microfluidic device)
IT Oxides (inorganic), uses
RL: **DEV (Device component use)**; USES (Uses)
(hydrates; microfluidic device)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 8 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:259071 CAPLUS Full-text
DOCUMENT NUMBER: 129:20035
TITLE: Study of the wetting hysteresis at hydrophilic and hydrophobic surfaces
AUTHOR(S): Pertsov, A. V.; Soboleva, O. A.; Porodenko, E. V.
CORPORATE SOURCE: Department of Chemistry, Moscow State University, Moscow, 119899, Russia
SOURCE: Colloid Journal (Translation of Kolloidnyi Zhurnal) (1998), 60(2), 221-225
CODEN: CJRSEQ; ISSN: 1061-933X
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 07 May 1998
AB A setup was designed, which makes it possible to adequately study (by the Wilhelmy plate method) the hysteresis and kinetic (relaxation) phenomena at wetting. Using this setup, the wetting hysteresis in CTAB aqueous solution-steel and CTAB solution-Teflon systems, as well as the hysteresis at the wetting of solid surfaces of different natures by water were studied. The results obtained were compared with those obtained by the sessile drop method.
CC 66-4 (Surface Chemistry and Colloids)
IT Measuring **apparatus**
(for study of wetting hysteresis at hydrophilic and hydrophobic surfaces)
IT Hysteresis
Surface
Wetting
(wetting hysteresis at **hydrophilic** and **hydrophobic** surfaces)
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:229732 CAPLUS Full-text
DOCUMENT NUMBER: 118:229732
TITLE: Modified carriers for reversed-phase liquid chromatographic separation of protein-containing samples
INVENTOR(S): Boos, Karl Siegfried; Walfort, Andreas; Eisenbeiss, Friedhelm; Lubda, Dieter
PATENT ASSIGNEE(S): Merck Patent GmbH, Germany
SOURCE: Ger. Offen., 14 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

DE 4130475	A1	19930318	DE 1991-4130475		19910913
EP 537461	A1	19930421	EP 1992-114902		19920901
EP 537461	B1	19960724			
R: BE, CH, DE, FR, GB, IT, LI, NL, SE					
CA 2078094	AA	19930314	CA 1992-2078094		19920911
CA 2078094	C	20021105			
JP 05203636	A2	19930810	JP 1992-243540		19920911
JP 3174637	B2	20010611			
US 6074555	A	20000613	US 1995-415766		19950403
PRIORITY APPLN. INFO.:			DE 1991-4130475	A	19910913
			US 1992-943793	B1	19920911
			US 1993-111963	B1	19930826

ED Entered STN: 12 Jun 1993

AB The title carriers comprise porous particles with fatty acid esters forming hydrophobic surfaces within the pores and with hydrophilic external surfaces. The particles are prepared by (1) introduction of OH groups, if not already present; (2) esterification of the OH groups on both internal and external surfaces with fatty acids; (3) enzymic hydrolysis of the esters only on the external surfaces with a lipase and/or an esterase which may be immobilized on particles whose diameter exceeds the mean pore diameter of the porous particles. Thus, porous silica gel particles (diameter 12 μm, mean pore diameter 7 nm) were 2,3-dihydroxypropoxylated by treatment with glycidyloxypropylmethyldimetho xysilane, esterified with stearoyl chloride, and hydrolyzed with lipase, either free or immobilized on crosslinked agarose. A column packed with such a carrier was used for determination of phenytoin in human plasma.

IC ICM G01N030-48
ICS B01D015-08

ICA C08L101-06; C08F008-14; C08F008-12; C07D209-20; C07D209-16; C07D473-00; C07D233-72; B01J020-10; B01J020-26; C12N011-00; C12N009-18

CC 9-3 (Biochemical Methods)
Section cross-reference(s): 1

IT Biopolymers
RL: **ANST (Analytical study)**
(reversed-phase liquid chromatog. of sample containing, stationary phase particles with hydrophilic surface and hydrophobic pores for)

IT Fatty acids, esters
RL: **ANST (Analytical study)**
(esters, pores coated with, in reversed-phase liquid chromatog. stationary phase particles)

IT **Surface**
(**hydrophilic**, reversed-phase liquid chromatog. stationary phase particles with **hydrophobic** pores and)

IT 58-55-9, Theophylline, analysis
RL: ANT (Analyte); **ANST (Analytical study)**
(determination of, by reversed-phase liquid chromatog., stationary phase preparation for)

IT 50-67-9, 5-Hydroxytryptamine, analysis 54-16-0, 5-Hydroxyindoleacetic acid, analysis 57-41-0, Phenytoin
RL: ANT (Analyte); **ANST (Analytical study)**
(determination of, in blood serum by reversed-phase liquid chromatog., stationary phase preparation for)

IT 111-64-8, Caprylyl chloride 112-76-5, Stearoyl chloride 141-75-3, Butyryl chloride
RL: **ANST (Analytical study)**
(dihydroxypropoxylated porous silica gel particles reaction with, in reversed-phase liquid chromatog. stationary phase preparation)

IT 9001-62-1, Lipase 9013-79-0, Esterase
RL: **ANST (Analytical study)**
(fatty acid esters with hydroxylated particles hydrolysis with, in reversed-phase liquid chromatog. stationary phase preparation)
IT 65799-47-5
RL: **ANST (Analytical study)**
(porous silica gel reaction with, in reversed-phase liquid chromatog. stationary phase preparation)

L101 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:71850 CAPLUS Full-text
DOCUMENT NUMBER: 102:71850
TITLE: Use of surface analysis methods for characterizing silicon wafers following various pretreatments
AUTHOR(S): Grundner, M.
CORPORATE SOURCE: Wacker-Chemitron./Forsch., Burghausen, D-8263, Fed. Rep. Ger.
SOURCE: Fresenius' Zeitschrift fuer Analytische Chemie (1984), 319(6-7), 853-4
CODEN: ZACFAU; ISSN: 0016-1152
DOCUMENT TYPE: Journal
LANGUAGE: German
ED Entered STN: 24 Feb 1985
AB ESCA, SIMS, and low-energy electron energy loss spectroscopy were used to characterize and analyze hydrophobic and hydrophilic surfaces of Si wafers resulting from purification treatments.
CC 79-5 (Inorganic Analytical Chemistry)
IT **Surface**
(anal. of **hydrophobic** and **hydrophilic**, of silicon wafers following purification treatments, by ESCA and SIMS and electron energy loss spectroscopy)
IT 7440-21-3, analysis
RL: **ANST (Analytical study)**
(anal. of hydrophobic and hydrophilic surfaces of, following purification treatments, by ESCA and SIMS and electron energy loss spectroscopy)

L101 ANSWER 11 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-176191 [19] WPIX
DOC. NO. CPI: C2005-057131 [19]
DOC. NO. NON-CPI: N2005-146706 [19]
TITLE: Inhibiting non-specific interaction of ligand and molecule other than target molecule, involves fixing ligand to metal **surface**, and reducing **hydrophobic** character of metal **surface**
DERWENT CLASS: B04; D16; S03
INVENTOR: NISHIMURA M; YAE T
PATENT ASSIGNEE: (REVE-N) REVERSE PROTEOMICS KENKYUSHO KK
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2005049157	A	20050224	(200519)*	JA	50[1]	G01N033-547

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2005049157 A		JP 2003-204470	20030731

PRIORITY APPLN. INFO: JP 2003-204470 20030731
INT. PATENT CLASSIF.:
MAIN: G01N033-547
SECONDARY: G01N033-15; G01N033-553; G01N033-566
BASIC ABSTRACT:
JP 2005049157 A UPAB: 20050708
NOVELTY - A ligand is fixed to a metal **surface**. The **hydrophobic** character of metal **surface** is reduced, to inhibit specific interaction between ligand and molecule other than target molecule.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) enhancing specific interaction of ligand and target molecule, which involves fixing a ligand to a metal **surface**, and reducing **hydrophobic** character of metal **surface**, to enhance specific interaction between ligand and target molecule; (2) analyzing specific interaction between ligand on metal surface and its target material, which involves fixing a ligand to a metal **surface**, and reducing **hydrophobic** character of metal **surface**, to inhibit non-specific interaction between ligand and molecule other than target molecule, and to enhance specific interaction between ligand and target molecule; (3) classifying target molecule, which involves analyzing the specific interaction between ligand and its target molecule, where ligand is fixed on metal **surface**, and reducing **hydrophobic** character of metal **surface**, to inhibit non-specific interaction between ligand and molecule other than the target molecule, and to enhance specific interaction between ligand and target molecule; (4) screening of target molecule, involves fixing ligand on metal **surface** through **hydrophilic** spacer, contacting sample with metal surface fixed with ligand, analyzing ligand interaction, and selecting the molecule which has the specific interaction with respect to ligand;
(5) solid-phase support, in which ligand is fixed, and is a metal. A hydrophilic spacer is interposed between metal and ligand; and (6) conforming introduction of hydrophilic spacer between ligand and metal **surfaces**, which involves introducing **hydrophilic** spacer when ligand is fixed to metal surface, and detecting leaving group produced by de-protecting the protecting group originating in the hydrophilic spacer.
USE - For inhibiting non-specific interaction of ligand and molecule other than target molecule used for selecting and purifying target molecule, and used in bioscience especially drug discovery research, post-genome research, proteomics, chemical genomics and chemical proteomics.
ADVANTAGE - The non-specific interaction between ligand and molecule other than target molecule is efficiently inhibited. The specific interaction between ligand and target molecule is efficiently enhanced. The **hydrophobic** character of metal **surface** is reduced by introducing **hydrophilic** spacer between metal **surface** and ligand. The target molecule is selected and purified based on intermolecular non-specific interaction and intermolecular specific interaction.
MANUAL CODE: CPI: B04-C03C; B05-A03B; B10-B04B; **B11-C08**; B12-K04; D05-H09; D05-H10; D05-H13
EPI: S03-E14A1; **S03-E14H**
TECH INORGANIC CHEMISTRY - Preferred Composition: The hydrophilic spacer has hydrogen bond acceptor number of 6 or more, hydrogen number donor number of 5 or more and total of hydrogen bond acceptor number and hydrogen bond donor number of 9 or more, and further has one or more carbonyl group in a molecule. The hydrophilic spacer does not have a functional group which becomes positive or negative when applying electric charge in aqueous solution. Preferred Material: The hydrophilic spacer is a material having at least one partial structure of formulae (Ia-Ie). The metal is gold.
A = linking group;
X1-X4 = 1-3C linear or branched alkyl, or methylene group optionally

substituted by single bond,;
R1-R16 = H, 1-3C linear or branched alkyl -CH2OH or hydroxyl;
m,b = 0-2;
a = 0-10;
n,c,p,d,e = 1-1000;
q = 1-7;
r = 1-10;and
f = 1-50.
Preferred Process: The **hydrophobic** character of metal **surface** is reduced by introducing **hydrophilic** spacer between metal **surface** and ligand. The detection of leaving group is implemented using mass spectrometry.ORGANIC CHEMISTRY - Preferred Group: The protecting group is n-fluorenyl methyl oxycarbonyl group.

L101 ANSWER 12 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-736265 [72] WPIX
CROSS REFERENCE: 2002-396360; 2002-499503; 2002-526638; 2003-031829
DOC. NO. CPI: C2004-258770 [72]
TITLE: Web material for high throughput screening and combinatorial experimentation, has substrate in web form, and microwells each having bottom and upstanding surface formed by adjacent separating zones
DERWENT CLASS: A23; A26; A89; B04; F03
INVENTOR: DESIE G; VANMAELE L
PATENT ASSIGNEE: (GEVA-C) AGFA-GEVAERT
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20040197236	A1	20041007	(200472)*	EN	11[2]	B01L003-00

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20040197236	A1 Cont of	US 2001-949359	20010907
US 20040197236	A1	US 2004-811668	20040329

PRIORITY APPLN. INFO: EP 2001-183 20010523
EP 2000-203182 20000915
INT. PATENT CLASSIF.:
MAIN: B01L003-00
BASIC ABSTRACT:
US 20040197236 A1 UPAB: 20050707
NOVELTY - A web material has a substrate in web form; and microwells arranged on the substrate in a predetermined pattern and separated from each other by separating zones. Each microwell has a bottom, and an upstanding surface formed by the adjacent separating zones. The substrate is a polyimide web, a hydrophilic woven textile, flexible metal, a metal oxide, or a textile having hydrophobic fibers that have been **surface**-treated with **hydrophilic** coatings.
DETAILED DESCRIPTION - A web material for combinatorial experimentation, comprises a substrate in web form; and microwells arranged on the substrate in a predetermined pattern and separated from each other by separating zones. Each microwell comprises a bottom, and an upstanding surface formed by the adjacent separating zones. The composition of the bottoms on the one hand and the composition of the separating zones and upstanding surfaces on the other hand show a different hydrophilicity. The substrate is a polyimide web, a hydrophilic woven textile, flexible metal, a metal oxide, or a textile

comprising hydrophobic fibers that have been surface-treated with hydrophilic coatings.

INDEPENDENT CLAIMS are also included for: (1) a method of manufacturing the web material, comprising: (a) providing the substrate in web form with a homogeneous hydrophilic surface covered with a heat or light sensitive hydrophobic layer having a particular degree of solubility in a developer; (b) exposing pattern-wise the hydrophobic layer with heat or light to pattern-wise change the solubility to more or less soluble in the developer; and (c) pattern-wise removing by the developer the soluble parts of the exposed hydrophobic heat or light sensitive layer, thus forming a pattern of microwells with hydrophilic bottoms and hydrophobic upstanding surfaces separated from each other by hydrophobic separating zones;

(2) an apparatus for rapid screening of substances for useful applications, comprising:

(a) a holder comprising an unwinding roll and the web material; (b) an application zone suited for applying substance(s) in the microwell(s) present in the application zone; (c) a screening zone for determining a useful property of the substance in the screening zone;

(d) a transporting mechanism to transport the web material from the holder to the application zone and the screening zone; and (e) optionally, a rewinding section; and (3) a method of rapid screening of substances for useful properties, comprising:

(a) unrolling the web material from the unwinding roll present in the holder of the apparatus;

(b) passing the web material through the application zone of the apparatus to apply the substance(s) in the microwell(s) present in the application zone;

(c) passing the web material through the screening zone of the apparatus for determining the useful property of the substance(s); and (d) optionally, rewinding the web material.

USE - For combinatorial experimentation, or for high throughput screening or high speed screening methodologies.

ADVANTAGE - The inventive material is thin and flexible, and has distinct regions that can accommodate fluids and/or solids. It can be incorporated into a simple workflow and apparatus. It can be handled in a much faster and easier way than conventional plate robots can do. MANUAL CODE: CPI: A05-J01B; A12-L04; B04-C03; B05-A01B; B11-C01; B11-C09; B11-C10; B12-K04E; F02-C01; F04-E

TECH INSTRUMENTATION AND TESTING - Preferred Component: The upstanding surface extends at most 500 mm above the bottom of the microwells. The bottoms of the microwells have undergone a surface-treatment to improve the dynamics of fluid spreading. The total amount of microwells present on the web material is larger than 1000. Markers are present on the web material in the web direction. The marker is a barcode present at the edge of the substrate. An identifier is present at the start and/or the end of the web. The substrate is an aluminum foil having a top layer of aluminum oxide applied by electrochemical oxidation, a flexible polymeric material or flexible glass.

Preferred Properties: The ratio of the total length (L) of the web to its width (W) is greater than 20. The microwells have an internal volume smaller than 10 microl.POLYMERS - Preferred Material: The flexible polymeric material is polyesters or polyimides.

L101 ANSWER 13 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-328395 [30] WPIX
DOC. NO. CPI: C2004-124442 [30]
TITLE: Storing device for storing DNA-containing objects, comprises a receptacle for holding the DNA-containing object and includes layer of receptacle adhesive
DERWENT CLASS: B07

INVENTOR: DINGES M
PATENT ASSIGNEE: (DING-I) DINGES M
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20040069673	A1	20040415	(200430)*	EN	11[11]	B65D073-00

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20040069673	A1	US 2002-269576	20021011

PRIORITY APPLN. INFO: US 2002-269576 20021011
INT. PATENT CLASSIF.:
MAIN: B65D073-00
BASIC ABSTRACT:
US 20040069673 A1 UPAB: 20050528
NOVELTY - A storing **device** comprising a receptacle for holding a DNA-containing object (78) and a layer of receptacle adhesive (58), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) a sticker (20) comprising a **first** layer representing a hinged flap, a top, and an opposed bottom side; and a **second** layer representing a top side and a bottom side and lying adjacent the **first** layer bottom side and including adhesive and cut out portion presenting an enclosed cavity for storage; and (2) a medical alert card for an individual comprising a three layer card body, the **first** layer including medical information, the **second** layer comprising a core having receptacle, and the third layer comprising a material consisting of removable backing paper, and/or releasing agent.
USE - The **device** is used for storing DNA-containing objects (claimed).
ADVANTAGE - The **device** contains easily readable medical information. It is provided with a sticker thus increasing likelihood that the medical information and/or DNA-containing object will be easily accessible when needed.
DESCRIPTION OF DRAWINGS - The figure is a perspective view of a medical alert DNA storage sticker illustrating the cut-out portion of the center layer.
Sticker (20)
Top layer (48)
Printed indicia (52)
Adhesive (58)
Middle layer (62)
Sidewalls (70)
DNA-containing object (78)
MANUAL CODE: CPI: B04-E01; B11-C06A; B11-C08E; **B11-C09**; **B12-K04F**
TECH INSTRUMENTATION AND TESTING - Preferred Components: The receptacle comprises a blister **pouch**. It has an indicia (52) providing information regarding an individual. It has a cavity within a card comprising of a material consisting of foam rubber, thermoset foam, plastic, cardboard, and/or paper. The DNA-containing object is on a separate medium. The **device** further comprises a memory **device** including medical information about the individual. The first layer of the sticker includes a printed indicia having bar code.

L101 ANSWER 14 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-363624 [34] WPIX
DOC. NO. CPI: C2004-137157 [34]

DOC. NO. NON-CPI: N2004-290804 [34]
TITLE: Droplet actuating apparatus for the synthesis of microarrays of biological, chemical, or biochemical samples, includes voltage source communicating with second conductive layer and conductive element
DERWENT CLASS: A89; B04; D16; P42; S03
INVENTOR: FAIR R B; KOLAR P
PATENT ASSIGNEE: (FAIR-I) FAIR R B; (KOLA-I) KOLAR P; (UYDU-N) UNIV DUKE
COUNTRY COUNT: 101

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20040055536	A1	20040325	(200434)*	EN	14[4]	C12Q001-68
WO 2004029608	A1	20040408	(200434)	EN		G01N027-26
AU 2003231756	A1	20040419	(200462)	EN		G01N027-26
US 6989234	B2	20060124	(200607)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20040055536	A1	US 2002-253372	20020924
AU 2003231756	A1	AU 2003-231756	20030424
WO 2004029608	A1	WO 2003-US12745	20030424

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2003231756	A1	Based on	WO 2004029608 A

PRIORITY APPLN. INFO: US 2002-253372 20020924
INT. PATENT CLASSIF.:
MAIN: C12Q001-68; G01N027-26
SECONDARY: B01L003-02; B05B005-25; B05C005-02; G01N015-06
IPC ORIGINAL: B01L0003-02 [I,A]; C12M0001-36 [I,A]; C12Q0001-68 [I,A]; G01N0015-04 [I,C]; G01N0015-05 [I,A]

BASIC ABSTRACT:

US 20040055536 A1 UPAB: 20050529
NOVELTY - A droplet actuating apparatus has first conductive layer with a first **hydrophobic surface** and a second conductive layer comprising a **hydrophilic surface**.
DETAILED DESCRIPTION - A droplet actuating apparatus has first conductive layer with a first **hydrophobic surface** and a second conductive layer comprising a **hydrophilic surface**. The second conductive layer is axially spaced from the first conductive layer to define a gap (g2). A conductive elongate element is disposed in the gap and comprises a second **hydrophobic surface**. A voltage source (V1) communicates with the second conductive layer and the elongate element.
USE - The method is used for electrostatically actuating a droplet (D) useful in the synthesis of microarrays of biological, chemical, or biochemical samples (claimed).
ADVANTAGE - The droplet actuating apparatus can synthesize (i.e. stamping or printing) a microarray of analyte-containing samples, without the use of conventional instruments that require contacting the droplet and/or microarray surface such as pens or pipettes. DESCRIPTION OF DRAWINGS - The figure is a side elevation view in cross-section of a droplet actuating apparatus of the invention. Parylene composition (26)

Planar body (22, 42)
Hydrophobic layer (24, 36)
Conductive layer (34, 44)
Droplet (D)
Control electrodes (E1-E3)
Gap (g2)
Voltage sources (V1, V2)

MANUAL CODE: CPI: A12-L04; B11-C08E6; B11-C09; B12-K04E; D05-H09; D05-H10
EPI: S03-E13B1; S03-E13D1; S03-E14H; S03-E15

TECH INSTRUMENTATION AND TESTING - Preferred Component: The hydrophilic surface of the second conductive layer comprises analyte-specific receptor sites. The second hydrophobic surface comprises a hydrophobized region of the elongate element. Conductive elongate elements are disposed in the gap. A spacer is provided that supports the elongate element. A container is provided, where the conductive layers and the elongate element are disposed. A filler fluid is disposed in the gap between the two conductive layers. An electronic controller communicates with the voltage source.
Preferred Dimension: The elongate element is spaced from the first conductive layer at a distance of approximately 0.05-approximately 2 mm.ELECTRICAL POWER AND ENERGY - Preferred Component: The first conductive layer comprises control electrodes (E1, E2, E3) covered by the first hydrophobic surface. A second voltage source (V2) is provided that communicates with the control electrodes and the elongate element.CERAMICS AND GLASS - Preferred Material: Each conductive layer (34, 44) comprises a planar body (22, 42) comprising a glass.INORGANIC CHEMISTRY - Preferred Material: Each conductive layer comprises a conductive material from indium tin oxide. The second hydrophobic surface comprises a hydrophobic layer disposed on the elongate element comprising a metal-containing wire.POLYMERS - Preferred Material: The first conductive layer comprises a dielectric material comprising a parylene composition (26). Each hydrophobic surface comprises a hydrophobic layer (24, 36) comprising polytetrafluoroethylene.

L101 ANSWER 15 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-109836 [12] WPIX
CROSS REFERENCE: 1993-405490; 1998-542446; 1999-253118; 2000-181356; 2001-015009; 2002-681599; 2004-374237; 2005-403378; 2005-487020
DOC. NO. CPI: C2005-036963 [12]
DOC. NO. NON-CPI: N2005-094772 [12]
TITLE: Assay device useful for determining presence or amount of several different target ligands in sample, comprises diagnostic element having capillary space that has discrete capture zones with capture element for binding target ligand
DERWENT CLASS: A89; B04; D16; S03
INVENTOR: BUECHLER K F
PATENT ASSIGNEE: (BIOS-N) BIOSITE INC
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 6767510	B1	20040727	(200512)*	EN	41[16]	G01N033-48

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6767510 B1	CIP of	US 1992-805563	19920521
US 6767510 B1	CIP of	US 1992-805653	19920521
US 6767510 B1	CIP of	US 1992-887526	19920521
US 6767510 B1	Div Ex	US 1993-65528	19930519
US 6767510 B1	CIP of	US 1995-447895	19950523
US 6767510 B1	CIP of	US 1995-447981	19950523
US 6767510 B1	CIP of	US 1997-810569	19970303
US 6767510 B1	Cont of	US 1997-810569	19970303
US 6767510 B1	CIP of	US 1997-828041	19970327
US 6767510 B1	Cont of	US 1997-902775	19970730
US 6767510 B1	Cont of	US 2000-613650	20000711
US 6767510 B1		US 2001-805653	20010313

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6767510 B1	CIP of	US 5458852 A
US 6767510 B1	CIP of	US 5885527 A
US 6767510 B1	CIP of	US 6019944 A
US 6767510 B1	CIP of	US 6143576 A
US 6767510 B1	Cont of	US 6143576 A
US 6767510 B1	CIP of	US 6156270 A
US 6767510 B1	Cont of	US 6274040 B

PRIORITY APPLN. INFO: US 2001-805653 20010313
US 1992-805563 19920521
US 1992-805653 19920521
US 1992-887526 19920521
US 1993-65528 19930519
US 1995-447895 19950523
US 1995-447981 19950523
US 1997-810569 19970303
US 1997-828041 19970327
US 1997-902775 19970730
US 2000-613650 20000711

INT. PATENT CLASSIF.:
MAIN: G01N033-48

BASIC ABSTRACT:

US 6767510 B1 UPAB: 20060121

NOVELTY - An assay device (10) (I) for determining presence or amount of several different target ligands in sample, comprises diagnostic element (6) having capillary space through which sample flows, where capillary space comprises non-absorbent surface, and several discrete capture zones on non-absorbent surface.

DETAILED DESCRIPTION - An assay device (10) (I) for determining the presence or amount of several different target ligands in a sample, comprises a diagnostic element (6) comprising a capillary space through which the sample flows, where the capillary space comprises a non-absorbent **surface** or non-absorbent **hydrophilic surface** region, and several discrete capture zones on the non-absorbent surface or on the non-absorbent **hydrophilic surface** region, each discrete capture zone comprises a capture element that binds one target ligand in the several different target ligands, and the non-absorbent **surface** or non-absorbent **hydrophilic surface** region comprises a width dimension substantially perpendicular to the direction of fluid flow through the capillary space, and each discrete capture zone spans the width dimension.

An INDEPENDENT CLAIM is included for a method for determining the presence or amount of several different target ligands in a sample, which involves: (a) contacting the diagnostic element of (I) with a sample and a labeled reagent that binds to several target ligands, where the sample and the labeled reagent flow through the capillary space for capture of each different target ligand at its corresponding capture zone, and generating several detectable signals from label bound to each different target ligand at its corresponding capture zone, the signals are related to the presence or amount of several different target ligands in the sample, and the labeled reagent is a fluorescently labeled reagent, or (b) contacting the diagnostic element of (I) with a sample and several ligand analog conjugates, where each ligand analog conjugate corresponds to one of the several different target ligands, the sample and several ligand analog conjugates flow through the capillary space, each different target ligand competes with its corresponding ligand analog conjugate for capture at its corresponding capture zone, and generating several detectable signals from ligand analog conjugate bound at its corresponding capture zone, where the signals are related to the presence of amount of several different target ligands in the sample.

USE - (I) is useful for determining the presence or amount of several different target ligands in a sample. (I) is useful in immunoassays and nucleic acid assays of environmental and industrial fluids, such as water and biological fluids and products, such as urine, blood, serum, plasma, spinal and amniotic fluids. (I) is useful for conducting assays on liquid samples suspected of containing an analyte of interest.

ADVANTAGE - (I) enables qualitative, semi-quantitative and quantitative determinations of one or more analytes in sample. (I) has textures and elements for the controlled movement of reagents in (I). (I) is free from membrane associated problems such as non-specific binding, by the use of defined surfaces, including grooved surfaces, time gates, fluid flow control units, all of which are constructed from non-absorbent materials. (I) is capable of detecting one or more target ligand or a conjugate in an amount related to the presence or amount of target ligand in a sample. (I) has units, for the controlled, timed movements of reagents within (I).

DESCRIPTION OF DRAWINGS - The figure shows a schematic, top perspective view of assay device for determining presence or amount of different target ligands in sample. sample addition zone (1)
sample addition reservoir (2) sample-reaction barrier (3) reaction chamber (4)
time gate (5)
diagnostic element (6)
reagent reservoir (7)
device (10)

MANUAL CODE: CPI: A12-L04B; A12-V03C2; A12-W11L; B04-B04B1; B04-B04D4; B04-B04L; B04-C01; B04-C03; B04-E01; B04-G01; B04-L01; B05-A01B; B05-A03B; B05-B02C; B11-C07A; B11-C07B3; B11-C08; B11-C12; B12-K04A; B12-K04E; D05-A02; D05-H09; D05-H10; D05-H11; D05-H12
EPI: S03-E09F; S03-E14B; S03-E14H

TECH INSTRUMENTATION AND TESTING - Preferred Device: (I) comprises at least 50 discrete capture zones, corresponding to at least 50 different target ligands. The capture element is chosen from an antibody or its binding fragment, nucleotide sequence, enzyme, chelator and biosensor. (I) further comprises a chamber fluidly connected to the diagnostic element, and time gate (5) that delays fluid flow between the chamber and the diagnostic element until binding of a component from a fluid to a zone of the time gate renders the zone sufficiently hydrophilic to permit fluid flow over or through the time gate. The discrete capture zones comprise particles immobilized on it, where the particles comprise the capture element immobilized on it. The particles are immobilized on the non-absorbent surface by magnetic binding, hydrophobic binding, hydrogen bonding, electrostatic binding or entrapment. The particles have

diameters ranging from 0.1-10 mm. The receptor is immobilized on a surface of the particle.
Preferred Method: The ligand analog conjugate is a fluorescently labeled ligand analog conjugate.POLYMERS - Preferred Particles: The particles are latex, polystyrene or nanoparticles.INORGANIC CHEMISTRY - Preferred Particles: The nanoparticles are chosen from silica, zirconia, alumina, titania, ceria, metal sols, or polystyrene. The nanoparticles have sizes in a range of 1-100 nm. The nanoparticles are immobilized on the non-absorbent surface through adsorption or covalent bonds.

L101 ANSWER 16 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-229519 [22] WPIX
DOC. NO. CPI: C2004-090208 [22]
DOC. NO. NON-CPI: N2004-181521 [22]
TITLE: Reacting a reagent with a cell, useful e.g. for drug screening or recombinant protein production, by depositing droplets on support surface
DERWENT CLASS: A89; B04; D16; S03
INVENTOR: CHATELAIN F; FOUILLET Y; FOUQUE B; FUCHS A; SCHAACK B
PATENT ASSIGNEE: (COMS-C) COMMISSARIAT ENERGIE ATOMIQUE
COUNTRY COUNT: 104

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
FR 2842747	A1	20040130	(200422)*	FR	43[8]	B01J019-00
WO 2004011938	A2	20040205	(200422)	FR		G01N033-50
AU 2003269041	A1	20040216	(200453)	EN		G01N033-50
EP 1525472	A2	20050427	(200529)	FR		G01N033-50
JP 2005533509	W	20051110	(200574)	JA	39	C12Q001-02
AU 2003269041	A8	20051103	(200629)	EN		G01N033-50

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2842747	A1	FR 2002-9326	20020723
AU 2003269041	A1	AU 2003-269041	20030721
EP 1525472	A2	EP 2003-750828	20030721
WO 2004011938	A2	WO 2003-FR2298	20030721
EP 1525472	A2	WO 2003-FR2298	20030721
JP 2005533509	W	WO 2003-FR2298	20030721
JP 2005533509	W	JP 2004-523860	20030721
AU 2003269041	A8	AU 2003-269041	20030721

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
AU 2003269041	A1	Based on	WO 2004011938	A
EP 1525472	A2	Based on	WO 2004011938	A
JP 2005533509	W	Based on	WO 2004011938	A
AU 2003269041	A8	Based on	WO 2004011938	A

PRIORITY APPLN. INFO: FR 2002-9326 20020723
INT. PATENT CLASSIF.:
MAIN: B01J019-00; C12Q001-02; G01N033-50
SECONDARY: B01L003-00; C12M001-00; C12N015-09; C12Q001-00; C12Q001-68; G01N001-28

BASIC ABSTRACT:

FR 2842747 A1 UPAB: 20060203

NOVELTY - Reacting a reagent (R) with at least one cell (C) comprising depositing C on a support (S), having a flat surface, as an aqueous droplet; covering the surface with a film (F) that allows passage of gas but prevents evaporation, where F is not miscible either with water or R; and initiating reaction by adding R to the droplet, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a device for the process comprising S, covered with F; system for depositing C-containing droplets and controlled atmosphere enclosure in which S is placed.

USE - The process is used for automated performance of large numbers of reactions, especially transfection experiments, on cells, especially for screening compounds (nucleic acids, proteins, peptides and peptide nucleic acid) for their effect on living cells; to study cellular systems (networks of neurons or epidermis); for expression of recombinant proteins; to identify nucleic acids that modulate gene expression; to identify genomic promoter sequences; and to study interactions between different types of cells.

ADVANTAGE - The process is automatable; requires only very small amounts of reagents; and provides reproducible results. Many reactions can be studied in the same cell; complex cellular systems can be analyzed, and the cells can be modified beforehand to facilitate detection of molecular interactions. MANUAL CODE:

CPI: A12-L04; B04-F01; B04-F02; B04-F05; B04-N0400E; B11-C09; B11-C10; B12-K04A; B12-K04E; B12-K04F; D05-H08; D05-H10

EPI: S03-E13D; S03-E14A1; S03-E14H

TECH BIOLOGY - Preferred Process: Droplets are retained on S by capillarity, and a second droplet containing R is injected directly into the first, or deposited close to the first, and reaction is then initiated by fusing the droplets. Alternatively, R is fixed to S or F. Droplets are deposited using fine capillaries or a nozzle, and after depositing a first set of droplets, S may be displaced. Cell cultures in droplet form are stable for 24 hours, and many droplets, each containing at least one cell (preferably 1-100) are deposited, separated from each other. Each drop may contain different cells or all contain the same type of cells, and droplets may be fused, specifically where C are glial cells or neurons, to allow them to communicate within a single droplet. Several R, for reaction with the same cell, may be applied sequentially. The reaction being initiated may be a cellular reaction, e.g. production of a recombinant protein, optionally followed by reaction with a second type of cell (by fusing droplets). Where the same type of cell is used in all droplets, deposition may be by immersion of the support, having a generally hydrophobic surface with hydrophilic regions, rather than injection.

Preferred Materials: F is an oil or organic solvent, especially mineral or silicone oil; air at 100% humidity; a solid, flexible film, or a rigid lid of porous material. R may be prepared directly after deposition on the support, by in situ synthesis, in vitro transcription or polymerization. Especially it is DNA (particularly as calcium phosphate precipitate) or a transcription factor, optionally labeled, particularly with a fluorophore or radioactive marker. C is a primary cell, hybridoma, stem cell and/or tissue fragment.INSTRUMENTATION AND TESTING - Preferred Support: This is made of silicon, glass or polymer, and includes at least one site designed for deposition of a droplet. These sites have size 5 micro2 to 5 mm2, and the surface may include (in addition to the sites, or as an alternative) one or more of: cavities 1 micron to 1 mm deep; outgrowths of thickness 1 micron to 1 mm, and/or at least one thread, all to promote attachment of droplets. The support is particularly a solid film, mounted on rollers that allow movement of the film, and thus displacement of the deposited droplets.

Preferred Device: This includes systems for delivering energy; optical treatment; application of magnetic and electrical fields; and promoting

transfection, all regulated by an automatic control system.POLYMERS - Preferred Film: F is particularly made of poly(dimethylsiloxane) or nitrocellulose.

L101 ANSWER 17 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-142789 [14] WPIX
CROSS REFERENCE: 2003-505676; 2003-845860
DOC. NO. CPI: C2004-057392 [14]
DOC. NO. NON-CPI: N2004-113862 [14]
TITLE: Biochips with maximization of reactor number based on molded plates and probe-conjugated substrates obtainable by minimization of occupied area of reactor isolating structures on substrate, useful in e.g. disease diagnosis
DERWENT CLASS: B04; D16; J04; L03; S03
INVENTOR: CHEN C; CHEN N; HU J; WANG J; ZOU F
PATENT ASSIGNEE: (CHEN-N) CHENGDU KUACHANG SCI & TECHNOLOGY CO LTD; (CHEN-N) CHENGDU KUACHANG SCI TECH CO LTD; (CHEN-I) CHEN C; (CHEN-I) CHEN N; (WANG-I) WANG J; (ZOUF-I) ZOU F
COUNTRY COUNT: 101

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2003106999	A1	20031224	(200414)*	ZH	33[10]	
CN 1432655	A	20030730	(200414)	ZH		C12Q001-68
CN 1464304	A	20031231	(200422)	ZH		G01N033-50
AU 2003203334	A1	20031231	(200451)	EN		
EP 1519191	A1	20050330	(200522)	EN		
US 20060057580	A1	20060316	(200620)	EN		
CN 1235050	C	20060104	(200655)	ZH		G01N033-543

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003106999	A1	WO 2003-CN55	20030122
CN 1464304	A	CN 2002-113864	20020612
CN 1432655	A	CN 2002-134007	20021104
AU 2003203334	A1	AU 2003-203334	20030122
EP 1519191	A1	EP 2003-701458	20030122
EP 1519191	A1	WO 2003-CN55	20030122
US 20060057580	A1	WO 2003-CN55	20030122
US 20060057580	A1	US 2004-517452	20041209
CN 1235050	C	CN 2002-113864	20020612

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003203334	A1 Based on	WO 2003106999 A
EP 1519191	A1 Based on	WO 2003106999 A

PRIORITY APPLN. INFO: CN 2002-134006 20021104
CN 2002-113864 20020612
CN 2002-133622 20020819
CN 2002-134007 20021104
INT. PATENT CLASSIF.:
IPC ORIGINAL: C12M0001-34 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,A]; G01N0033-543 [I,A]

IPC RECLASSIF.: B01L0003-00 [I,A]; B01L0003-00 [I,C]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C]; G01N0033-00 [I,A]; G01N0033-00 [I,C]; G01N0033-50 [I,A]; G01N0033-50 [I,C]; G01N0033-53 [I,A]; G01N0033-53 [I,C]; G01N0033-531 [I,A]; G01N0033-531 [I,C]; G01N0033-68 [I,A]; G01N0033-68 [I,C]

BASIC ABSTRACT:

WO 2003106999 A1 UPAB: 20060121

NOVELTY - A biochip mainly comprising 1 or more molded plates and substrates or substrate conjugated with probes, in which maximization of the reactor number of such biochip can be achieved by e.g. minimization of occupied area in the reactor isolating structures on the substrates, is new.

DETAILED DESCRIPTION - A biochip mainly comprises 1 or more molded plates and substrates or substrate conjugated with probes, in which maximization of the reactor number of such biochip can be achieved by minimization of occupied area in the reactor isolating structures on the substrates, minimization of occupied area of other structures except that in the reactors or/and maximization of effective area of the substrates, and which is characterized in that the isolating structures between the reactors can be **surface** isolation, **surface hydrophobic** isolation or height difference isolation based on the isolating height.

An INDEPENDENT CLAIM is also included for a biochip assembly containing the biochips combined through embedding, sealing or/and mechanical immobilization for interconnection, with total width of at most 25 mm and the number of chips and probes modifiable for combination as required.

USE - The biochips are useful in gene expression detection, screening of genes or drugs, disease diagnosis, environmental monitoring and management, and forensic identification.

ADVANTAGE - Such biochips have maximization of the reactor number and minimization of average substrate area to reduce cost per unit reactor of a multi-reactor biochip, and increase usage efficiency. DESCRIPTION OF DRAWINGS - Sealed-type flow biochips based on surface isolation: (A) vertical view; (B) elevated view of the molded plate in such biochip; (C) probe array formed on the biochip; (D) cross-sectional view along a-a line in (A); and (E) cross-sectional view along b-b line in (A). (Drawing includes non-English language text). MANUAL CODE:

CPI: B11-C08E6; **B11-C09**; B12-K04A; B12-K04E; **B12-K04F**; D05-H09; J04-B01; L03-H03B

EPI: **S03-E14H**

TECH MECHANICAL ENGINEERING - Preferred Biochips: The molded plates and substrates are formed into 1 or more sealed-type flow reactors with inlets and outlets. Binding between the molded plates and substrates can be reversible or irreversible, e.g. through gravity, elasticity, screws or mechanical force, magnetic force from magnetic iron or electromagnet, or/and adhesive for removable bond. When required to remove the reactor top or/and reduce reactor height, the irreversible tight-sealing bonds or molded plates can be wholly or partially dismantled mechanically. Isolating structure in the reactor is particularly a structure with a recessed surface, on which at least 1 unit is available to control the flow rate of reaction media, such as hydrophilic or hydrophobic material layer, water- absorbing material layer based on capillary phenomenon, conducting channel, duct and groove for flow regulation. An adhesive can also be use for binding between molded plates and substrates to form several open-type reactors, with the isolating structures between the reactors at a height of not less than 0.7 mm, particularly not less than 1 mm, which can be reduced or removed if necessary by dissolved the adhesive or mechanically removing it, e.g. by applying an organic solvent, ultrasound, grinding or/and cutting. Height of the isolating structures between the open-type reactors is particularly not more than 1 mm but their hydrophobicity is higher than that of the substrate, and a special liquid-discharging area is provided in the reactors. When the reactors formed on the substrates are arranged into 2 or more lines, width of the

side substrates is not more than 20 mm, but when only arranged into 1 line, such width can be not more than 9 mm. The reactors are in stripe shape. Isolating structures in the reactors are taller than all or a part of other structures in the biochip, and these other structures including the scanning standard surface on the same plane located at the substrate probe surface. Area of the biochip is larger than the substrate area, and all or some of the liquid-adding and/or discharging structures of the reactors disposed on the molded plates extend over the substrate region, which are provided with the already-specified structures for regulating reaction media. Such biochip can be a 2-surface biochip with probes fixed onto the top and bottom surface of symmetric or asymmetric structure. Thickness of the substrate is not less than 1 +/- 0.1 mm.POLYMERS - Preferred Biochips: The hydrophilic materials include hydrophilic inorganic materials like aluminum compounds, hydrophilic organic materials e.g. polyacrylamide compounds, various hydrophilic paints, and hydrophilic natural polymeric materials and their derivatives. The hydrophobic materials are various hydrophobic organic materials. The water-absorbing materials include capillaries, paper, membranes, and solid-phase porous materials containing fibers or/and hydrophilic inorganic materials with various hydrophilic surfaces. The substrate is made from e.g. inorganic materials like glass, silicon and its compounds, organic polymers of polypropylene, polyvinyl chloride, polystyrene, nylon and nitrocellulose, and organic materials surface-coated with gold, silver or metallic compounds.

L101 ANSWER 18 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-627429 [67] WPIX
CROSS REFERENCE: 2003-803920
DOC. NO. CPI: C2004-012708 [04]
DOC. NO. NON-CPI: N2004-028668 [04]
TITLE: Microdevice useful for isolating, manipulating and detecting moiety e.g. cell or molecule, has substrate and photorecognizable coding pattern on substrate, and does not comprise an anodized metal surface layer
DERWENT CLASS: B04; D16; J04; L03; P85; S03; U12
INVENTOR: CHEN D; CHENG J; DAVID R; HUANG M; LIU L; ROTHWARF D M; SHAO W; SUN B; TAO G; TAO G L; WANG X; WU L; XU J; YANG W
PATENT ASSIGNEE: (AVIV-N) AVIVA BIOSCIENCES CORP; (CHEN-I) CHEN D; (CHEN-I) CHENG J; (HUAN-I) HUANG M; (LIUL-I) LIU L; (ROTH-I) ROTHWARF D M; (SHAO-I) SHAO W; (SUNB-I) SUN B; (TAOG-I) TAO G; (TAOG-I) TAO G L; (UYQI-C) UNIV QINGHUA; (WANG-I) WANG X; (WULL-I) WU L; (XUJJ-I) XU J; (YANG-I) YANG W
COUNTRY COUNT: 98

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002059603	A2	20020801	(200267)*	EN	104[17]	G01N033-543
US 20020137059	A1	20020926	(200270)	EN		C12Q001-68
US 20020187501	A1	20021212	(200301)	EN		C12Q001-68
CN 1409110	A	20030409	(200345)	ZH		G01N033-00
AU 2002239885	A1	20020806	(200427)	EN		
US 20060024732	A1	20060202	(200610)	EN		
AU 2002239885	A8	20051020	(200615)	EN		B01J019-00

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 2002059603 A2	WO 2002-US850 20020111
US 20020137059 A1 Provisional	US 2001-264458P 20010126
US 20020187501 A1 Provisional	US 2001-264458P 20010126
US 20060024732 A1 Provisional	US 2001-264458P 20010126
US 20020137059 A1	US 2001-924428 20010807
US 20020187501 A1 CIP of	US 2001-924428 20010807
US 20060024732 A1 CIP of	US 2001-924428 20010807
AU 2002239885 A1	AU 2002-239885 20020111
CN 1409110 A	CN 2002-105337 20020225
US 20020187501 A1	US 2002-104571 20020321
US 20060024732 A1 Div Ex	US 2002-104571 20020321
US 20060024732 A1	US 2005-230411 20050920
AU 2002239885 A8	AU 2002-239885 20020111

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002239885 A1	Based on	WO 2002059603 A
AU 2002239885 A8	Based on	WO 2002059603 A

PRIORITY APPLN. INFO: US 2001-924428 20010807
US 2001-264458P 20010126
CN 2001-104318 20010228

INT. PATENT CLASSIF.:

MAIN:	C12Q001-68; G01N033-00; G01N033-543; B01J019-00
SECONDARY:	G01N033-52; G01N033-53; G01N033-532; G01N033-58; C07B061-00; G06K019-06; G09F003-00
IPC ORIGINAL:	C12Q0001-68 [I,A]

BASIC ABSTRACT:

WO 2002059603 A2 UPAB: 20060120

NOVELTY - A microdevice (I) comprising a substrate and a photorecognizable coding pattern on the substrate, and not comprising an anodized metal surface layer, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a kit for manipulating a moiety, comprising (I), and a chip on which a moiety-microdevice complex can be manipulated; (2) an array (II) for detecting moieties, comprising (I) placed or immobilized on a surface; (3) a library (III) that is synthesized using (I); (4) a two-dimensional optical encoder (IV) comprising a substrate, and a microfabricated or micromachined two-dimensional optical code on the substrate; (5) a carrier (V) for chemical synthesis, comprising a surface suitable for chemical synthesis, which comprises a microfabricated or micromachined two-dimensional optical code which identifies a chemical reaction to be conducted on the surface and/or product of the chemical reaction; (6) a carrier (VI) for labeling substance, comprising a surface for binding/linking a substance, and a microfabricated or micromachined two-dimensional optical code on surface which is used for identifying substance linked or coupled to carrier; and (7) a chip (VII) comprising several microfabricated two-dimensional optical encoders, each having biological and chemical substances linked to it, which are identified by the optical code on each optical encoder.

USE - (I) is useful for isolating a moiety such as cell, cellular organelle, virus, molecule or aggregate or its complex, that involves providing (I), contacting a fluid sample containing or suspected of containing the moiety with (I) under conditions allowing binding between the moiety and binding partner, and recovering (I) from the sample, where the identity of the isolated moiety is assessed by photoanalysis of the photorecognizable coding pattern. (I) is also useful for manipulating a moiety, which is effected

through a combination of a structure that is external to the chip and a structure that is built-in in the chip. Neither the moiety nor the binding partner is directly manipulatable by a physical force, and the device contains an element that makes microdevice or moiety-microdevice complex manipulatable. The moieties is manipulated sequentially or simultaneously. (I) is also useful for detecting a moiety. (II) is useful for synthesizing a library which involves providing (I), and synthesizing the entities on (I) and sorting (I) after each synthesis cycle according to the photorecognizable coding patterns. The single synthesized entity is peptides, proteins, oligonucleotides, nucleic acids, vitamins, oligosaccharides, carbohydrates, lipids, small molecules, complex or its combination. The synthesized library comprises a defined set of entities that are involved in a biological pathway, belongs to a group of entities with identical or similar biological function, expressed in a stage of cell cycle, cell type, tissue type, organ type or developmental stage, entities whose expression and/or activity are altered in a disease or disorder type or stage, or entities whose expression and/or activity are altered by drug or other treatments. The synthesized library comprises a defined set of nucleic acid fragments comprising 10, 15, 20, 25, 50, 75, 100, 200 or 500 nucleotides, or a defined set of protein or peptide fragments. (III) is useful for generating an antibody library, especially a phage display library. (IV) is useful for conducting chemical synthesis on two-dimensional optical encoder, by mixing (IV), chemically modifying the non-encoding regions of the surface of (IV), continuously passing (IV) through a sorting device capable of identifying (IV), and transporting or sorting (IV) into corresponding reaction chambers based on their optical codes, performing synthesis procedures on (IV) in their corresponding reaction chambers, and after each step of the synthesis, mixing the optical encoders and sorting (IV) in a sorting device into new, corresponding reaction chambers again based on the optical codes on (IV) and the subsequent requisite synthesis steps for (IV) encoders, and performing a new step of the synthesis, until all requisite synthesis steps are performed. The sorting device comprises a microchannel that allows the passage of one and only optical encoder at a time, the encoder suspended in a liquid solution is manipulated or controlled to pass through the microchannel by an applied force, and the encoder is monitored or detected by a code-reader that is located in the vicinity of microchannel. (VII) is useful for measuring and/or detecting a substance, such as DNA, RNA, peptide, protein, antibody, antigen, sugar, lipid, cytokine, hormone, cell, bacteria, virus or its composite (all claimed). (I) is also useful in a high-throughput analysis. (IV) is useful in chemistry, pharmaceutical industry and biotechnology, and for labeling and controlling compound synthesis process, making different kinds of chips such as DNA, protein and polysaccharide chips, and fabricating a chip.

ADVANTAGE - (V) or (VI) easily determines the identity and quantity of unknown substances and conducts the high throughput screening for reaction products.

DESCRIPTION OF DRAWINGS - The figure shows microdevices which are rectangular in shape and the holes are introduced along the middle lines of the device.

MANUAL CODE: CPI: B03-L; B04-B03C; B04-C01; B04-C02; B04-C03; B04-D01; B04-E01; B04-F01; B04-F02; B04-F07; B04-F10; B04-F11; B04-G01; B04-H01; B04-J01; B04-N04; B11-B; B11-C01A; B11-C01B; B11-C07; B11-C08; B11-C08E6; B12-K04; D05-H08; D05-H09; D05-H10; D05-H11; D05-H12A; D05-H13; J04-B01; L03-J
EPI: S03-E03E; S03-E14H4; U12-B03F

TECH BIOTECHNOLOGY - Preferred Microdevice: In (I), the substrate comprises a material such as silicon (silicon dioxide or silicon nitride), plastic, glass, ceramic, rubber, carbon, oxidized metal, polymer, or their combinations, and **hydrophobic/hydrophilic surface**. The shape of the substrate is sphere, square, rectangle (of surface area 10-10000 squared-microns), triangle, circular disc (of diameter 3-500 microns), cube-like shape (of side width 10-100 microns),

cube, rectangular parallelepiped (cuboid), cone, cylinder, prism, pyramid, right-angled circular cylinder and other regular or irregular (of single-dimension 1-500 microns) shape. The thickness of the substrate is 0.1-10 microns. The substrate comprises a silicon layer or metal layer comprising a magnetic material. The metal layer is **aluminum** layer and comprises nickel metal or CoTaZr (cobalt-tantalum-zirconium). The photorecognizable coding pattern is the material composition of the substrate itself, a hole in the substrate or a substance immobilized on the substrate, and a substance having an optical refractive property that is different from the optical refractive property of the substrate. The versatility of the recognizable coding pattern is caused by the shape, number, position distribution, optical refractive property, material composition, or their combination, of the substrate, hole(s) or substance(s) immobilized on the substrate. The photorecognizable coding pattern is fabricated or microfabricated on the substrate, or lithographically patterned such as photolithography, electron beam lithography or X-ray lithography. The substance is comprised within the substrate and is deposited by evaporation or sputtering. (I) further comprises: several binding partners such as cell, cellular organelle, virus, molecule or aggregate or its complex, that specifically binds to different moieties to be manipulated; an element (such as magnetic, conductive or insulating material, a material having high or low impedance, or a charged material) that facilitates and/or enables manipulation of the microdevice and/or a moiety/microdevice complex, by a physical force such as dielectrophoresis, traveling-wave dielectrophoresis, magnetic or acoustic or electrostatic, mechanical, optical radiation or a thermal convection force, and not by a magnetic force; and a detectable marker such as dye, radioactive substance or fluorescent substance, and a molecular tag such as a DNA sequence or an antibody. (I) does not comprise a porous surface and comprises a metal layer and a non-metal surface layer, and a hole as the photorecognizable coding pattern, which does not penetrate through the entire depth of the substrate.

Preferred Kit: The kit further comprises instructions for coupling the moiety to the microdevice and/or for manipulating the moiety-microdevice complex on the chip.

Preferred Optical Encoder: In (IV), the two-dimensional code is grating, aperture-based code and a black-white line-segment code.

Preferred Carrier: In (V), the non-coding region of the carrier further comprises a chemical layer linked to the carrier surface by a cleavable linker such as optically cleavable, enzymatically cleavable and thermally cleavable linker which allows for subsequent chemical synthesis reactions. (V) and (VI) comprise a spherical portion and a flat portion comprising a microfabricated or micromachined two-dimensional optical code and the spherical portion is used for chemical synthesis or linking or coupling the substance.

L101 ANSWER 19 OF 30	WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER:	2002-499922 [53] WPIX
DOC. NO. CPI:	C2002-141527 [53]
TITLE:	Decreasing adsorption of an organic material to a surface e.g. a peptide on **hydrophobic** or **hydrophilic surfaces**, comprises use of a surface adsorbing polymer
DERWENT CLASS:	A89; B04; D16; P34; P42
INVENTOR:	SUDOR J
PATENT ASSIGNEE:	(GEST-C) GENSET; (GEST-C) GENSET SA; (ISTF-C) SERONO GENETICS INST SA
COUNTRY COUNT:	96

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002030571	A2	20020418	(200253)*	EN	49[6]	
US 20020103352	A1	20020801	(200253)	EN		
AU 2002011894	A	20020422	(200254)	EN		
EP 1362240	A2	20031119	(200377)	EN		
US 6709692	B2	20040323	(200421)	EN		
US 20040115833	A1	20040617	(200440)	EN		
JP 2004526939	W	20040902	(200457)	JA	90	G01N037-00
EP 1362240	B1	20060927	(200663)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002030571	A2	WO 2001-US42631	20011010
US 20020103352	A1 Provisional	US 2000-239316P	20001010
US 6709692	B2 Provisional	US 2000-239316P	20001010
US 20040115833	A1 Provisional	US 2000-239316P	20001010
US 6709692	B2 Provisional	US 2001-326091P	20010928
US 20040115833	A1 Provisional	US 2001-326091P	20010928
EP 1362240	A2	EP 2001-979987	20011010
US 20020103352	A1	US 2001-975192	20011010
US 6709692	B2	US 2001-975192	20011010
US 20040115833	A1 Div Ex	US 2001-975192	20011010
EP 1362240	A2	WO 2001-US42631	20011010
JP 2004526939	W	WO 2001-US42631	20011010
AU 2002011894	A	AU 2002-11894	20011010
JP 2004526939	W	JP 2002-534004	20011010
US 20040115833	A1	US 2003-720532	20031124
EP 1362240	B1	EP 2001-979987	20011010
EP 1362240	B1	WO 2001-US42631	20011010

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
US 20040115833	A1	Div ex	US 6709692	B
AU 2002011894	A	Based on	WO 2002030571	A
EP 1362240	A2	Based on	WO 2002030571	A
JP 2004526939	W	Based on	WO 2002030571	A
EP 1362240	B1	Based on	WO 2002030571	A

PRIORITY APPLN. INFO: US 2001-326091P 20010928
US 2000-239316P 20001010
US 2001-975192 20011010
US 2003-720532 20031124

INT. PATENT CLASSIF.:
MAIN: G01N037-00
SECONDARY: C12Q001-68; G01N031-20
IPC ORIGINAL: C08J0007-00 [I,C]; C08J0007-04 [I,A]; G01N0033-543 [I,A]
IPC RECLASSIF.: G01N0033-543 [I,A]; G01N0033-543 [I,C]

BASIC ABSTRACT:

WO 2002030571 A2 UPAB: 20050526

NOVELTY - Decreasing adsorption of an organic material to a surface comprises:
(a) adding a surface adsorbing polymer (A) to a fluid sample having an organic material;
(b) contacting the mixture of (A) and the fluid sample to a surface; and

(c) performing a fluid operation, where (A) binds non-covalently to the surface, is not one of the reactants of the fluid operation and does not inhibit the fluid operation.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) determining the quantity of (A) to be added to the fluid operation comprising:

(a) adding the fluid sample and (A) to an apparatus having a surface;

(b) performing at least one fluid operation in the apparatus; and (c) determining the optimum quantity of (A) capable of obtaining the highest reaction yield or the lowest amount of adsorption of the organic material on the surface;

(2) dynamically maintaining or regenerating the polymer coating adsorbed on the surface of a microchannel comprising: (a) introducing to a channel disposed in a substrate, at least two fluid samples, thus creating two fluid sample zones; and (b) providing at least one separating fluid zone located between the two fluid sample zones;

(3) a reaction mixture comprising (A) (preferably a block-copolymer of polymers comprising polyethylene glycols and polypropylene glycols) and at least one reactant of the fluid operation in a buffered solution; and

(4) a kit for performing fluid operations comprising the reaction mixture and a document, label or computer readable media having instructions for carrying out the fluid operation or for reducing the adsorption of the organic material to the surface.

USE - The method is used for decreasing the adsorption of an organic material e.g. dNTP, nucleic acid, ddNTP, amino acid, protein, lipid or a chemical compound to a surface comprising polystyrene, polypropylene, polymethyl methacrylate, polyvinyl chloride, polyethylene, polycarbonate, polysulfone, fluoropolymer, polyamide, silicone or an elastomer (claimed).

ADVANTAGE - The polymer is particularly stable at temperatures and conditions required for biochemical reactions, especially in applications involving temperature cycling or polymerization of polynucleotides or polypeptides.

MANUAL CODE: CPI: A12-L04; A12-W11; A12-W11L; B04-C03; B04-E01; B04-E05; B11-C08; B11-C08E3; B11-C08E4; B11-C08E5; B11-C08E6; B11-C09; B12-K04E; B12-K04F; D05-H; D05-H09; D05-H10

TECH BIOTECHNOLOGY - Preferred Reaction Mixture: The reaction mixture is used in polymerase chain reaction (PCR), LSR, microsequencing (MIS) or nucleic acid polymerization.INSTRUMENTATION AND TESTING - Preferred Apparatus: The apparatus is 96-well microtiter plate, 384 well microtiter plate, 1536 well microtiter plate, greater than 1536 microtiter plate, microcentrifuge tube, channel, test tube, multi-well plate or a reaction well.

Preferred Method: The fluid sample is an aqueous or non-aqueous solution. The fluid operation is a PCR reaction or a primer extension reaction and is performed in a microfluidics device.POLYMERS - Preferred Components: (A) is polyacrylamide, polydimethylacrylamide, N-isopropylacrylamide, polyethylene glycol, polypropylene glycol, polyethylene oxide or polypropylene oxide, or a block-copolymer comprising at least two of polyacrylamide, polydimethylacrylamide, N-isopropylacrylamide, polyethylene glycol, polypropylene glycol, polyethylene oxide, polypropylene oxide or polydimethylsiloxane. (A) has molecular weight of at least 1 x 10 to the power of 6 daltons and is not nucleic acid, deoxynucleotide triphosphate (dNTP), ddNTP, amino acid, protein, lipid or other biomolecule.ORGANIC CHEMISTRY - (A) is ethylene glycol, propylene glycol, ethylene oxide or propylene oxide.

L101 ANSWER 20 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2002-681599 [73] WPIX

CROSS REFERENCE: 1993-405490; 1998-542446; 1999-253118; 2000-181356; 2001-015009; 2004-374237; 2005-109836; 2005-403378; 2005-487020

DOC. NO. CPI: C2002-192289 [73]
DOC. NO. NON-CPI: N2002-538040 [73]
TITLE: Regulating fluid flow in fluid conducting device involves introducing fluid to capillary channel comprising capillary regions having hydrophilic and hydrophobic surfaces
DERWENT CLASS: B04; J04; S03
INVENTOR: BUECHLER K F
PATENT ASSIGNEE: (BIOS-N) BIOSITE INC
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20020086436	A1	20020704	(200273)*	EN	43[16]	G01N033-48
US 6905882	B2	20050614	(200540)	EN		G01N033-48

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20020086436	A1 CIP of	US 1992-887526	19920521
US 20020086436	A1 Div Ex	US 1993-65528	19930519
US 20020086436	A1 CIP of	US 1995-447895	19950523
US 20020086436	A1 CIP of	US 1995-447981	19950523
US 20020086436	A1 CIP of	US 1997-810569	19970303
US 20020086436	A1 CIP of	US 1997-828041	19970327
US 20020086436	A1 CIP of	US 1997-902775	19970730
US 20020086436	A1 CIP of	US 2000-613650	20000711
US 20020086436	A1	US 2001-982629	20011018

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 20020086436	A1 CIP of	US 5458852 A
US 20020086436	A1 CIP of	US 5885527 A
US 20020086436	A1 CIP of	US 6019944 A
US 20020086436	A1 CIP of	US 6143576 A
US 20020086436	A1 CIP of	US 6156270 A
US 20020086436	A1 CIP of	US 6271040 B

PRIORITY APPLN. INFO: US 2001-982629 20011018
US 1992-887526 19920521
US 1993-65528 19930519
US 1995-447895 19950523
US 1995-447981 19950523
US 1997-810569 19970303
US 1997-828041 19970327
US 1997-902775 19970730
US 2000-613650 20000711
INT. PATENT CLASSIF.:
MAIN: G01N033-48
BASIC ABSTRACT:
US 20020086436 A1 UPAB: 20060120
NOVELTY - Regulating fluid flow in fluid conducting device involves introducing fluid to capillary channel comprising capillary regions having hydrophilic and hydrophobic surfaces. The fluid is introduced into a capillary channel in a device (10). The channel comprise capillary regions (R1,R2). The

capillary region (R1) comprises a **hydrophilic surface** and the capillary region (R2) comprises a **hydrophobic surface** adjacent to the capillary region (R1). The fluid flows through the capillary region (R1) to contact the **hydrophobic surface**.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a device that conducts the fluid through one or more capillary channels.

USE - For regulating fluid flow in a device which conducts fluid through one or more capillary channels, used in conducting assays including qualitative, semi-quantitative and quantitative determination of one or more analyzes in a single test format.

ADVANTAGE - The assay device performs semi-quantitative and quantitative determinations without critical pipetting steps and without absorbent components. The device includes textures and elements for controlled movement of reagents and is suitable for quantitative assays. DESCRIPTION OF DRAWINGS - The figure shows the partially schematic, top perspective view of the device. Device (10)

MANUAL CODE: CPI: **B11-C09**; B12-K04; J04-B01
EPI: S03-E09; **S03-E14H**

L101 ANSWER 21 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-328018 [34] WPIX
DOC. NO. CPI: C2001-100547 [34]
TITLE: Binding nucleic acids to a solid phase, useful for isolation or purification before processing, comprises contacting the nucleic acids with a **surface** carrying **hydrophilic** and **hydrophobic** groups
DERWENT CLASS: A96; B04; D16
INVENTOR: NORDHOFF E; RAUTH H; REINHARDT R
PATENT ASSIGNEE: (PLAC-C) MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN
COUNTRY COUNT: 21

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2001019980	A1	20010322	(200134)*	DE	40[2]	C12N015-10
DE 19943374	A1	20010329	(200134)	DE		C07H021-00
EP 1214406	A1	20020619	(200240)	DE		
US 7022835	B1	20060404	(200624)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001019980	A1	WO 2000-EP8807	20000908
DE 19943374	A1	DE 1999-19943374	19990910
EP 1214406	A1	EP 2000-958528	20000908
EP 1214406	A1	WO 2000-EP8807	20000908
US 7022835	B1	WO 2000-EP8807	20000908
US 7022835	B1	US 2002-69974	20020709

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1214406	A1	Based on	WO 2001019980	A
US 7022835	B1	Based on	WO 2001019980	A

PRIORITY APPLN. INFO: DE 1999-19943374 19990910
INT. PATENT CLASSIF.:

MAIN: C07H021-00; C12N015-10
SECONDARY: C07H001-06; C12Q001-68; G01N033-50
IPC ORIGINAL: C07H0019-00 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C]; C07H0021-02 [I,A]; C07H0021-04 [I,A]

BASIC ABSTRACT:

WO 2001019980 A1 UPAB: 20050525

NOVELTY - Method for binding nucleic acids (I) comprising contacting a solution of (I) with a solid phase (SP) that: (1) has both hydrophobic and **hydrophilic** groups on its **surface**, in the presence of salts and poly(ethylene glycol) (PEG) (SP1); or

(2) is a hydrophilic, water-soluble polymer in presence of a dehydrating agent (III) (SP2).

(I) becomes reversibly bound in a non-sequence-specific manner.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) process for isolating and/or purifying (I) using the new method;

(b) a method for sequencing or synthesis of (I) that includes binding (I) to SP by the new method; (c) method for identifying analytes, using (I) bound by the new method; and

(d) a reagent kit comprising binding buffer, containing salt and PEG, and an SP.

USE - The method is used to bind/isolate/purify (I), as a preliminary to sequencing and synthesis by extension reaction, or bound (I) can be used for determination of analytes.

ADVANTAGE - The method is simple, cost effective, suitable for automation and provides high binding yields (reducing the amount of solid phase required). It is applicable to (I) of any length (including those larger than 100 kb such as artificial chromosomes) and by varying salt and PEG concentrations, a degree of selectivity can be achieved. MANUAL CODE: CPI: A05-H03; A12-W11L; B04-C03; B04-E01; B11-B; B11-C01; B11-C08D; B11-C08E; B11-C08E4; B11-C08E5; **B11-C09** ; B12-K04A3; **B12-K04F**; D05-H02; D05-H09; D05-H10; D05-H12; D05-H13; D05-H18; D05-H19; D05-J

Member(0001)

ABEQ DE 19943374 A1 UPAB 20050525

NOVELTY - Method for binding nucleic acids (I) comprising contacting a **solution** of (I) with a solid phase (SP) that:

(1) has both hydrophobic and **hydrophilic** groups on its **surface**, in the presence of salts and poly(ethylene glycol) (PEG) (SP1); or

(2) is a hydrophilic, water-**soluble** polymer in presence of a dehydrating agent (III) (SP2).

(I) becomes reversibly bound in a non-sequence-specific **manner**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) process for isolating and/or purifying (I) using the new method;

(b) a method for sequencing or synthesis of (I) that includes binding (I) to SP by the new method;

(c) method for identifying analytes, using (I) bound by the new method; and

(d) a reagent kit comprising binding buffer, containing salt and PEG, and an SP.

USE - The method is used to bind/isolate/purify (I), as a preliminary to sequencing and synthesis by extension reaction, or bound (I) can be used for determination of analytes.

ADVANTAGE - The method is simple, cost effective, suitable for automation and provides high binding yields (reducing the amount of solid phase required). It is applicable to (I) of any length (including those

larger than 100 kb such as artificial chromosomes) and by varying salt and PEG concentrations, a degree of selectivity can be achieved.

TECH BIOTECHNOLOGY - Preferred Solid Phase: SP1 carries:
(i) alkyl (particularly C8 and/or C18) or aromatic hydrophobic groups; and (ii) hydroxy groups as hydrophilic groups, and is particularly a magnetic bead in which hydrophobic groups represent 10-30% of the surface, to minimize clumping.
Conditions may be manipulated to provide some selectivity for:
(1) single- or double-stranded (I); or
(2) (I) of different lengths.
Typically, double-stranded (I) are preferentially bound at monovalent cation concentration 0.5-4 M, divalent cation concentration not over 5 mM and PEG concentration not over 15 wt.%, while single-stranded (I) are favored at divalent cation concentration 5-100 mM and 10-30% PEG.
Very short (I) are favored in presence of 15-40% by weight (wt.%) PEG and 10-1000 mM salt. For purification, the treated SP is removed, washed to eliminate contaminants, then eluted for recovery of (I), which may then be used for sequencing or extension reactions by usual methods. SP2 is particularly a polysaccharide with terminal hydroxy groups, specifically dextran. The dehydrating agent is particularly a mixture of salts and PEG, and may also include a chaotropic salt buffer.
Preferred Nucleic Acid: This is preferably DNA, especially an amplification product.
Preferred Kits: These may also include washing and elution buffers.INORGANIC CHEMISTRY - Preferred Salts: These are alkali, alkaline earth and/or ammonium halides.POLYMERS - Preferred Reagents: The PEG preferably has molecular weight 1-20, especially 6-15, kD.

L101 ANSWER 22 OF 30 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-259302 [23] WPIX
DOC. NO. CPI: C2000-079483 [23]
TITLE: Plate with series of hydrophilic microcavities for use in chemical or biological analysis enable closer packing of test areas
DERWENT CLASS: A96; B04; D16; J04; L03
INVENTOR: CAILLAT P; ROSILIO C
PATENT ASSIGNEE: (COMS-C) COMMISSARIAT ENERGIE ATOMIQUE
COUNTRY COUNT: 21

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
FR 2783179	A1	20000317	(200023)*	FR	39[11]	B01J019-00
WO 2000016082	A1	20000323	(200023)	FR		G01N027-327
EP 1114314	A1	20010711	(200140)	FR		G01N027-327
JP 2002525573	W	20020813	(200267)	JA	35	G01N033-15
EP 1114314	B1	20050223	(200516)	FR		G01N027-327
DE 69923852	E	20050331	(200523)	DE		G01N027-327
US 6902705	B1	20050607	(200538)	EN		B01L003-00
DE 69923852	T2	20060209	(200611)	DE		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2783179	A1	FR 1998-11561	19980916
DE 69923852	E	DE 1999-69923852	19990915
EP 1114314	A1	EP 1999-942974	19990915
EP 1114314	B1	EP 1999-942974	19990915

DE 69923852 E	EP 1999-942974 19990915
WO 2000016082 A1	WO 1999-FR2191 19990915
EP 1114314 A1	WO 1999-FR2191 19990915
JP 2002525573 W	WO 1999-FR2191 19990915
EP 1114314 B1	WO 1999-FR2191 19990915
DE 69923852 E	WO 1999-FR2191 19990915
US 6902705 B1	WO 1999-FR2191 19990915
JP 2002525573 W	JP 2000-570568 19990915
US 6902705 B1	US 2001-805772 20010316
DE 69923852 T2	DE 1999-69923852 19990915
DE 69923852 T2	EP 1999-942974 19990915
DE 69923852 T2	WO 1999-FR2191 19990915

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69923852 E	Based on	EP 1114314 A
EP 1114314 A1	Based on	WO 2000016082 A
JP 2002525573 W	Based on	WO 2000016082 A
EP 1114314 B1	Based on	WO 2000016082 A
DE 69923852 E	Based on	WO 2000016082 A
US 6902705 B1	Based on	WO 2000016082 A
DE 69923852 T2	Based on	EP 1114314 A
DE 69923852 T2	Based on	WO 2000016082 A

PRIORITY APPLN. INFO: FR 1998-11561 19980916
INT. PATENT CLASSIF.:
MAIN: B01J019-00; B01L003-00; G01N027-327; G01N033-15
SECONDARY: C03C017-30; C12M001-00; C12M001-34; C12N015-09; C12Q001-00; G01N033-50; G01N033-53; G01N033-543
IPC RECLASSIF.: C12Q0001-00 [I,A]; G01N0027-327 [I,A]; G01N0033-543 [I,A]
BASIC ABSTRACT:

FR 2783179 A1 UPAB: 20060214

NOVELTY - An apparatus for chemical or biological analysis comprises a support material having a multitude of microcavities, the surfaces of the walls and base of the microcavities, and the area immediately around their openings, being hydrophilic in nature, whilst the surface between the microcavities is hydrophobic in nature.

DETAILED DESCRIPTION - A cross-section of a typical microcavity has a support material (21) with a cavity (23) coated on its base (24), sides (25), and an outer rim (26) with a hydrophilic material, the remainder of the surface (27) being coated with a hydrophobic material. An INDEPENDENT CLAIM is also included for the production of the apparatus.

USE - The apparatus is useful where a large number of analyses need to be carried out, such as in pharmacological screening or for DNA testing.

ADVANTAGE - Because the apparatus has a large number of microcavities, the space between each test site is not limited by the physical size of water droplets. It is therefore possible to put more sites into a given area, giving better utilization of space. DESCRIPTION OF DRAWINGS - The drawing shows a cross-section of a typical microcavity.

Support material (21)

Cavity (23)

Hydrophilic base coating (24) Hydrophilic side coating (25) Hydrophilic outer rim coating (26) Hydrophobic coating (27)

MANUAL CODE: CPI: A11-C04B2; A12-L04; A12-W11L; B04-B03C; B05-A03; B05-B01B; B05-B02C; **B11-C08**; B12-K04E; **B12-K04F**; D05-H09; D05-H12D; J04-B01; L03-H

Member(0002)

ABEQ WO 2000016082 A1 UPAB 20060214

NOVELTY - An apparatus for chemical or biological analysis comprises a support material having a multitude of microcavities, the surfaces of the walls and base of the microcavities, and the area immediately around their openings, being hydrophilic in nature, whilst the surface between the microcavities is hydrophobic in nature.

DETAILED DESCRIPTION - A cross-section of a typical microcavity has a support material (21) with a cavity (23) coated on its base (24), sides (25), and an outer rim (26) with a hydrophilic material, the remainder of the surface (27) being coated with a hydrophobic material.

An INDEPENDENT CLAIM is also included for the production of the apparatus.

USE - The apparatus is useful where a large number of analyses need to be carried out, such as in pharmacological screening or for DNA testing.

ADVANTAGE - Because the apparatus has a large number of microcavities, the space between each test site is not limited by the physical size of water droplets. It is therefore possible to put more sites into a given area, giving better utilization of space.

DESCRIPTION OF DRAWINGS - The drawing shows a cross-section of a typical microcavity.

Support material (21)
Cavity (23)
Hydrophilic base coating (24)
Hydrophilic side coating (25)
Hydrophilic outer rim coating (26)
Hydrophobic coating (27)

Member(0003)

ABEQ EP 1114314 A1 UPAB 20060214

NOVELTY - An apparatus for chemical or biological analysis comprises a support material having a multitude of microcavities, the surfaces of the walls and base of the microcavities, and the area immediately around their openings, being hydrophilic in nature, whilst the surface between the microcavities is hydrophobic in nature.

DETAILED DESCRIPTION - A cross-section of a typical microcavity has a support material (21) with a cavity (23) coated on its base (24), sides (25), and an outer rim (26) with a hydrophilic material, the remainder of the surface (27) being coated with a hydrophobic material.

An INDEPENDENT CLAIM is also included for the production of the apparatus.

USE - The apparatus is useful where a large number of analyses need to be carried out, such as in pharmacological screening or for DNA testing.

ADVANTAGE - Because the apparatus has a large number of microcavities, the space between each test site is not limited by the physical size of water droplets. It is therefore possible to put more sites into a given area, giving better utilization of space.

DESCRIPTION OF DRAWINGS - The drawing shows a cross-section of a typical microcavity.

Support material (21)
Cavity (23)
Hydrophilic base coating (24)
Hydrophilic side coating (25)
Hydrophilic outer rim coating (26)
Hydrophobic coating (27)

TECH BIOLOGY - Preferred Reagent: The preferred biological reagents used in the apparatus are oligonucleotides.MECHANICAL ENGINEERING - Preferred Apparatus: The shape of each microcavity is preferably that of a truncated cone with a small base compared width the depth. The hydrophilic material

used may be a single substance, or two may be used, the first for coating the base and walls, the second for coating the rim, with only the first containing the relevant chemical or biological reagent. The hydrophilic material preferably carries epoxy, hydroxy, thiol, primary or secondary amino or carboxyl groups, while the hydrophobic material is preferably a hydrocarbon or fluorocarbon. If desired the base material may incorporate an electronic system to carry out various functions such as to address the sites or to heat them. The apparatus is made by forming hollows in the surface of the support, applying the hydrophobic material to defined areas, then applying the hydrophilic material to areas of the support that do not carry the hydrophobic material. The hollows may be made by an engraving process, which may be mechanical or chemical. The support is preferably silica or glass, which is oxidized and treated with a hydrophobic silane of formula (I).
R1-R3 = 1-3C alkoxy or halogen;
R4 = straight or branched hydrocarbon or fluorocarbon.
It is then treated with a hydrophilic silane of formula (II).
R5 = straight or branched hydrocarbon carrying at least one hydrophilic group selected from epoxy, hydroxy, thiol, primary or secondary amino or carboxyl groups.
Alternatively, the support may carry a metallic layer of Au, Ag or Cu or their alloys, and the hydrophilic and hydrophobic surfaces are obtained by reaction of these with a hydrophobic or hydrophilic thiol or disulfide.ORGANIC CHEMISTRY - Preferred Material: The hydrophilic material preferably carries epoxy, hydroxy, thiol, primary or secondary amino or carboxyl groups, while the hydrophobic material is preferably a hydrocarbon or fluorocarbon. If desired the base material may incorporate an electronic system to carry out various functions such as to address the sites or to heat them.

L101 ANSWER 23 OF 30 JICST-EPlus COPYRIGHT 2006 JST on STN
ACCESSION NUMBER: 1060340257 JICST-EPlus Full-text
TITLE: Fabrication of Indium Tin Oxide Whiskers by Sputtering
AUTHOR: TAKAKI SATORU; AOSHIMA YUKI
SATOH RYOHEI
CORPORATE SOURCE: Osaka Univ., Osaka, Jpn
Asahi Glass Co., Ltd., Yokohama, Jpn
SOURCE: Jpn J Appl Phys Part 1, (2006) vol. 45, no. 4A, pp. 2714-2721. Journal Code: G0520B (Fig. 10, Tbl. 1, Ref. 10)
ISSN: 0021-4922
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New
ABSTRACT:
Whisker crystals and whisker structures have many possibilities for industrial applications because of their unique shape with high aspect ratios. However, their fabrication methods need a high-temperature process and a limited ***substrate*** , thereby limiting their applications. Therefore, a new fabrication method that can prepare whiskers at low cost and directly on a versatile **substrate**, such as a glass **substrate**, is required. We found that indium tin oxide coatings with well-developed whisker structures could be prepared on glass **substrates** heated at 300.DEG.C. using conventional DC magnetron sputtering. These whisker coatings consist of continuous underlayer and upper structures with many whiskers. Each whisker is 500nm to 1Mm in length and 10 to 20nm in diameter. We revealed that the whisker structures were well grown under low-oxygen sputtering conditions and

these whisker coatings could be categorized into three types of whisker morphology by scanning electron microscopy (SEM) observation and X-ray diffraction analysis (XRD). Whisker coatings of the first type have many needle structures and are strongly oriented along the (222) axis normal to the substrate. Whisker coating of the second type are increasingly oriented along the (400) axis and show a structure consisting of many trunks with side branches like similar to fir tree. Whisker coatings of the last type are equally oriented along (222) and (400) axes and have many fish-bone-like whisker structures. These whisker coatings may offer many possibilities for industrial applications, for example, emitter material of field-emission displays, and surface structures for super-***hydrophilic*** or super-hydrophobic surfaces. (author abst.)

CLASSIFICATION: BK14020I; BK16110U (539.23.07; 539.211 SPUTTER)
CONTROLLED TERM: scanning electron microscope; X-ray diffractometry; emitter(semiconductor); aspect ratio; covering; field emission; sputtered deposition; indium oxide; tin oxide; solid solution; substrate(plate); glass; whisker
BROADER TERM: electron microscope; microscope; X-ray analysis; instrumental analysis; analysis(separation); analysis; electrode; ratio; surface treatment; treatment; electron emission; particle emission; emission; physical vapor deposition; vapor deposition; indium compound; 3B group element compound; metal oxide; oxide; chalcogenide; oxygen group element compound; oxygen compound; tin compound; carbon group element compound; solid(matter); plate classified by application; plate(material); ceramics; needle-like crystal; crystal

L101 ANSWER 24 OF 30 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1
ACCESSION NUMBER: 1996:432358 BIOSIS Full-text
DOCUMENT NUMBER: PREV199699145964
TITLE: Biomimetic pathways for assembling inorganic thin films.
AUTHOR(S): Aksay, I. A. [Reprint author]; Trau, M.; Manne, S.; Honma, I.; Yao, N.; Zhou, L.; Fenter, P.; Eisenberger, P. M.; Gruner, S. M.
CORPORATE SOURCE: Dep. Chemical Engineering, Princeton Materials Inst., Princeton, NJ, USA
SOURCE: Science (Washington D C), (1996) Vol. 273, No. 5277, pp. 892-898.
CODEN: SCIEAS. ISSN: 0036-8075.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Sep 1996
Last Updated on STN: 26 Sep 1996
ABSTRACT:Living organisms construct various forms of laminated nanocomposites through directed nucleation and growth of inorganics at self-assembled organic templates at temperatures below 100 degree C and in aqueous solutions. Recent research has focused on the use of functionalized organic surfaces to form continuous thin films of single-phase ceramics. Continuous thin films of mesostructured silicates have also been formed on hydrophobic and ***hydrophilic*** surfaces through a two-step mechanism. ***First*** , under acidic conditions, surfactant micellar structures are self-assembled at the solid/liquid interface, and second, inorganic precursors condense to form an inorganic-organic nanocomposite. Epitaxial coordination of adsorbed surfactant tubules is observed on mica and graphite ***substrates*** , whereas a random arrangement is observed on amorphous silica. The ability to process ceramic-organic nanocomposite films by these

methods provides new technological opportunities.
CONCEPT CODE: Microscopy - Electron microscopy 01058
Biochemistry studies - General 10060
Biophysics - General 10502
Biophysics - Molecular properties and macromolecules 10506
Anatomy and Histology - Microscopic and ultramicroscopic anatomy 11108
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques; Morphology
INDEX TERMS: Miscellaneous Descriptors
ANALYTICAL METHOD; BIOCHEMISTRY AND BIOPHYSICS; BIOMIMETIC FILM FORMATION; INORGANIC THIN FILM; LAMINATED NANOCOMPOSITES; SCANNING ELECTRON MICROSCOPY; SURFACTANT MICELLAR STRUCTURE
ORGANISM: Classifier
Organisms 00500
Super Taxa
Organisms
Organism Name
organism
organisms
Taxa Notes
Organisms

L101 ANSWER 25 OF 30 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:435911 BIOSIS Full-text
DOCUMENT NUMBER: PREV200300435911
TITLE: Cosmetic effervescent cleansing pillow.
AUTHOR(S): Farrell, Linda [Inventor, Reprint Author]; Slavtcheff, Craig Stephen [Inventor]; Znaiden, Alexander Paul [Inventor]; Vinski, Paul [Inventor]
CORPORATE SOURCE: ASSIGNEE: Unilever Home & Personal Care USA, Division of Conopco, Inc.
PATENT INFORMATION: US 6610312 20030826
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Aug 26 2003) Vol. 1273, No. 4. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Sep 2003
Last Updated on STN: 17 Sep 2003
ABSTRACT:A wiping article is provided which includes an effervescent cleanser composition held within a pouch formed from a first and ***second*** substrate sheet. At least one of the ***substrate*** sheets must be water permeable. The effervescent composition is an intimate mixture of an acid material such as citric acid and an alkaline material such as sodium bicarbonate. Water contact causes the combination to effervesce. A dry surfactant such as sodium cocoyl isethionate in contact with the water and effervescing carbon dioxide results in a highly pleasant sudsing system. Skin benefit agents may be included within the composition. The effervescent action may improve deposition of the skin benefit agents onto the skin.
NAT. PATENT. CLASSIF.:424401000
CONCEPT CODE: General biology - Miscellaneous 00532
INDEX TERMS: Major Concepts
Cosmetics; Equipment Apparatus Devices

and Instrumentation
INDEX TERMS: Chemicals & Biochemicals
effervescent cleanser composition; sodium cocoyl isethionate
INDEX TERMS: Methods & Equipment
cosmetic effervescent cleansing pillow: medical supplies; wiping article: medical supplies

L101 ANSWER 26 OF 30 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:463912 BIOSIS Full-text
DOCUMENT NUMBER: PREV200100463912
TITLE: Cosmetic effervescent cleansing pillow.
AUTHOR(S): Farrell, Linda [Inventor]; Slavtcheff, Craig Stephen [Inventor]; Znaiden, Alexander Paul [Inventor]
CORPORATE SOURCE: ASSIGNEE: Chesebrough-Pond's USA Co., division of Conopco, Inc.
PATENT INFORMATION: US 6217854 20010417
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Apr. 17, 2001) Vol. 1245, No. 3. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Oct 2001
Last Updated on STN: 23 Feb 2002
ABSTRACT:A wiping article is provided which includes an effervescent cleanser composition held within a pouch formed from a first and ***second*** substrate sheet. At least one of the ***substrate*** sheets must be water permeable. The effervescent composition is an intimate mixture of an acid material such as citric acid and an alkaline material such as sodium bicarbonate. Water contact causes the combination to effervesce. A dry surfactant such as sodium cocoyl isethionate in contact with the water and effervescing carbon dioxide results in a highly pleasant sudsing system. Skin benefit agents may be included within the composition. The effervescent action may improve deposition of the skin benefit agents onto the skin.
NAT. PATENT. CLASSIF.:424701000
CONCEPT CODE: General biology - Miscellaneous 00532
INDEX TERMS: Major Concepts
Cosmetics; Equipment, Apparatus, Devices and Instrumentation
INDEX TERMS: Methods & Equipment
cosmetic effervescent cleansing pillow: equipment

L101 ANSWER 27 OF 30 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:535814 BIOSIS Full-text
DOCUMENT NUMBER: PREV200000535814
TITLE: Cosmetic effervescent cleansing pillow.
AUTHOR(S): Farrell, Lind [Inventor, Reprint author]; Slavtcheff, Craig Stephen [Inventor]; Znaiden, Alexander Paul [Inventor]; Vinski, Paul [Inventor]
CORPORATE SOURCE: Stratford, CT, USA
ASSIGNEE: Chesebrough-Pond's USA Co., a division of Conopco, Inc., Greenwich, CT, USA
PATENT INFORMATION: US 6063390 20000516
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (May 16, 2000) Vol. 1234, No. 3. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent

LANGUAGE: English
ENTRY DATE: Entered STN: 13 Dec 2000
Last Updated on STN: 11 Jan 2002
ABSTRACT:A wiping article is provided which includes an effervescent cleanser composition held within a pouch formed from a first and ***second*** substrate sheet. At least one of the ***substrate*** sheets must be water permeable. The effervescent composition is an intimate mixture of an acid material such as citric acid and an alkaline material such as sodium bicarbonate. Water contact causes the combination to effervesce. A dry surfactant such as sodium cocoyl isethionate in contact with the water and effervescing carbon dioxide results in a highly pleasant sudsing system. Skin benefit agents may be included within the composition. The effervescent action may improve deposition of the skin benefit agents onto the skin.
NAT. PATENT. CLASSIF.:424404000
CONCEPT CODE: General biology - Miscellaneous 00532
INDEX TERMS: Major Concepts
Cosmetics; Equipment, Apparatus, Devices and Instrumentation; Dermatology (Human Medicine, Medical Sciences)
INDEX TERMS: Chemicals & Biochemicals
carbon dioxide; citric acid; sodium bicarbonate; sodium cocoyl isethionate
INDEX TERMS: Methods & Equipment
cleansing pillow: equipment
INDEX TERMS: Miscellaneous Descriptors
effervescent action
REGISTRY NUMBER: 124-38-9 (carbon dioxide)
77-92-9 (citric acid)
144-55-8 (sodium bicarbonate)

L101 ANSWER 28 OF 30 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1990:520 BIOSIS Full-text
DOCUMENT NUMBER: PREV199089000520; BA89:520
TITLE: PROTEIN ADSORPTION FROM BUFFER AND PLASMA ONTO HYDROPHILIC-HYDROPHOBIC POLYETHYLENE OXIDE-POLYSTYRENE MULTIBLOCK COPOLYMERS.
AUTHOR(S): GRAINGER D W [Reprint author]; OKANO T; KIM S W
CORPORATE SOURCE: DEP PHARM, UNIV UTAH, SALT LAKE CITY, UTAH 84112, USA
SOURCE: Journal of Colloid and Interface Science, (1989) Vol. 132, No. 1, pp. 161-175.
CODEN: JCISA5. ISSN: 0021-9797.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 5 Dec 1989
Last Updated on STN: 5 Dec 1989
ABSTRACT:The influence of substrate hydrophilic-hydrophobic balance on the adsorption of proteins from buffer and plasma was investigated using a series of amphiphilic multiblock copolymers composed of poly(ethylene oxide) (PEO) and polystyrene (PS). Adsorption of albumin, fibrinogen, and immunoglobulin G was monitored from single-component buffer, multicomponent buffer, and plasma solutions in contact with polymer-coated beads. Protein adsorption from buffer demonstrated kinetics and adsorption totals that correlated to the hydrophilic-hydrophobic content of the PEO-PS surfaces; however, no significant correlations existed between bulk composition, in vitro, and ex vivo blood compatibility tests. From plasma, adsorption to the surfaces showed two interesting results. First, minimum levels of protein adsorption witnessed on a PEO-PS (40% PEO) copolymer were not observed

in the competitive adsorption of the same species from buffer. These results were correlated to minimum platelet adhesion and activation in vitro and optimal whole blood compatibility ex vivo. **Second**, fibrinogen uptake from plasma exhibited transient, fluctuating kinetics on both the PEO and PS homopolymer surfaces while two PEO-PS copolymer surfaces showed no fluctuations. Overall, few correlations between buffer adsorption, plasma adsorption, or resulting in vitro and ex vivo analyses were observed. This suggests that buffered systems oversimplify the protein adsorption scenario and lack significant correlations to surface interactions in whole blood and plasma.

CONCEPT CODE: Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Blood - Blood and lymph studies 15002

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation)

INDEX TERMS: Miscellaneous Descriptors
WHOLE BLOOD PROTEIN PLASMA PROTEIN **HYDROPHILIC** -**HYDROPHOBIC** CONTENT **SURFACE** INTERACTIONS

REGISTRY NUMBER: 9002-88-4 (POLY(ETHYLENE)

L101 ANSWER 29 OF 30 JAPIO (C) 2006 JPO on STN
ACCESSION NUMBER: 1987-262867 JAPIO Full-text
TITLE: FORMATION OF MONOMOLECULAR BUILT-UP FILM PATTERN
INVENTOR: TAMURA HIDEJI
PATENT ASSIGNEE(S): MATSUSHITA ELECTRIC IND CO LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 62262867	A	19871114	Showa	G03F007-00

APPLICATION INFORMATION
STN FORMAT: JP 1986-107042 19860509
ORIGINAL: JP61107042 Showa
PRIORITY APPLN. INFO.: JP 1986-107042 19860509
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1987
INT. PATENT CLASSIF.:
MAIN: G03F007-00
SECONDARY: B05D001-20; B05D003-06; G03C001-74; G03C005-00; G03F007-16; H01L021-30
ADDITIONAL: H01L029-28

ABSTRACT:
PURPOSE: To enable pattern formation at a molecular level by forming the 1st monomolecular film on a **substrate** and irradiating radiations thereon to selectively convert the hydrophobic or **hydrophilic** property on the **surface** of the 1st monomolecular film and forming the 2nd monomolecular film.
CONSTITUTION: The monomolecular film 2 consisting an either saturated or unsatd. long chain fatty acid (for example, CH<SB>3</SB>-(CH)<SB>n</SB>- COOH, n is integer) is built-up into 3 layers on the silicon **substrate** 1 having a **hydrophobic surface**. The **surface** part 3 of the built-up film of the monomolecular film 2 is regularly arranged with only the carboxyl groups 4

(i.e., hydrophilic groups) of the monomolecular film 2 consisting of the long chain fatty acid. The powerful radiations 5 are then irradiated partially thereon. The **substrate** is moved in the direction where the **substrate** emerges from the surface of the developing liquid in a Langmuir-Blodgett's technique under the same conditions as the conditions for forming the films up to the three layers, then the film 14 in the form in which the hydrophilic groups 4 face each other similarly as heretofore sticks to the parts 13 where the radiations are not irradiated with the 4th layer 12, but the film 14 does not stick to the irradiated parts 10 as the hydrophilic property is extremely weak. COPYRIGHT: (C)1987,JPO&Japio

L101 ANSWER 30 OF 30 JAPIO (C) 2006 JPO on STN
ACCESSION NUMBER: 2002-075956 JAPIO Full-text
TITLE: PROCESSOR FOR PLATE-SHAPED **SUBSTRATE** AND PROCESSING METHOD
INVENTOR: TAKAHARA YOICHI; HARA KOJI; OSAWA TOSHIYUKI; SANO YASUSHI; KIKUCHI HIROSHI
PATENT ASSIGNEE(S): HITACHI LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2002075956	A	20020315	Heisei	H01L021-306

APPLICATION INFORMATION
STN FORMAT: JP 2000-266013 20000830
ORIGINAL: JP2000266013 Heisei
PRIORITY APPLN. INFO.: JP 2000-266013 20000830
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2002
INT. PATENT CLASSIF.:
MAIN: H01L021-306
SECONDARY: B08B003-04; B08B003-12; B08B007-04; G02F001-13; G02F001-1333; H01L021-304

ABSTRACT:
PROBLEM TO BE SOLVED: To contrive the simplification and downsizing of device constitution, the reduction in quantity of used treatment liquid, and the sharp relaxation of readhesion of foreign matter, in the processing of a plate-shaped **substrate**. SOLUTION: This processor is equipped with **first** and **second** processing parts the space between whose **hydrophilic surfaces** in opposition is charged with treatment liquid, and a third processing part which lies between those **first** and **second** processing parts and gives external force to the treatment liquid or a **substrate** to be processed, and each of the **first** and **second** processing part has a **first** member having the above **hydrophilic surface**, and a **second** member which lies on the side of the end of that **first** member and whose opposed **hydrophobic surface** forms a space part roughly continuous to the space part of that **first** member and which repels the treatment liquid in the vicinity of that end to the side of that **first** member. COPYRIGHT: (C)2002,JPO

FILE 'HOME' ENTERED AT 10:17:23 ON 25 OCT 2006

SEARCH HISTORY

=> d his nofile

(FILE 'HOME' ENTERED AT 09:45:50 ON 25 OCT 2006)

FILE 'STNGUIDE' ENTERED AT 09:46:07 ON 25 OCT 2006

FILE 'JICST-EPLUS, BIOTECHNO, BIOSIS, JAPIO, BIOENG, CEABA-VTB' ENTERED AT 09:53:36 ON 25 OCT 2006

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L1          164 SEA ABB=ON  RAMSAY C?/AU
L2          665 SEA ABB=ON  SIMPSON W?/AU
L3         4725 SEA ABB=ON  HYDROPHILIC(3A) SURFACE#
L4         6419 SEA ABB=ON  HYDROPHOBIC(3A) SURFACE#
L5        14508 SEA ABB=ON  SWAB?
L6       929947 SEA ABB=ON  (FIRST(P) SECOND) OR (1ST(P) 2ND)
L7      1004224 SEA ABB=ON  SUBSTRATE#
L8        21540 SEA ABB=ON  ANALYTE#
L9        15346 SEA ABB=ON  POUCH OR SACHET
L10      311020 SEA ABB=ON  SEAL###
L11         402 SEA ABB=ON  (COEXTRU? OR CO EXTRU?)(2A) LAMINAT?
L12       10081 SEA ABB=ON  ETHYLENE(W)((VINYL(W)(ACETATE OR ALCOHOL)) OR
                  (METHACRYLATE OR METH ACRYLATE))
L13       49269 SEA ABB=ON  (ALUMINUM OR ALUMINIUM OR METAL?)(3A)(FOIL# OR
                  SHEET###)
L14       44903 SEA ABB=ON  (BENZALKONIUM OR BENZETHONIUM)(W) CHLORIDE OR
                  CHLORHEXIDINE OR QUAT?(2A) AMMONIUM
L15       60910 SEA ABB=ON  GLYCEROL
L16      142814 SEA ABB=ON  ALBUMIN
L17      196121 SEA ABB=ON  ATP OR ADENOSINE TRIPHOSPHATE
L18           2 SEA ABB=ON  L1 AND L2
                D SCAN
L19     3788993 SEA ABB=ON  DEVICE# OR APPARATUS
L20           6 SEA ABB=ON  L3 AND L4 AND L6 AND (L7 OR L8)
L21           0 SEA ABB=ON  L3 AND L4 AND L19 AND L9
L22           0 SEA ABB=ON  L3 AND L4 AND L19 AND (L9 OR L10 OR L11)
L23           3 SEA ABB=ON  L19 AND L9 AND L6 AND (L7 OR L8)
L24          68 SEA ABB=ON  L19 AND (L12 OR L13 OR L14) AND ((L3 AND L4) OR L5
                OR (L6 AND (L7 OR L8)))
L25           0 SEA ABB=ON  L19 AND (L12 OR L13 OR L14) AND ((L3 AND L4))
L26           9 SEA ABB=ON  L19 AND (L12 OR L13 OR L14) AND L5
                D SCAN
                D QUE
                D QUE L24
L27          59 SEA ABB=ON  L19 AND (L12 OR L13 OR L14) AND L6 AND (L7 OR L8)

                D QUE
L28           1 SEA ABB=ON  L19 AND (L12 OR L13 OR L14) AND L6 AND L8
                D SCAN
                D KWIC
L29        1022 SEA ABB=ON  L19 AND L9
L30           0 SEA ABB=ON  L29 AND L8
L31           1 SEA ABB=ON  L29 AND L5
                D SCAN
                D SCAN L20
                D SCAN L23
                D KWIC L23
L32           0 SEA ABB=ON  L15 AND L14 AND L16 AND L17
L33           1 SEA ABB=ON  L3 AND L4 AND L5
                D SCAN
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     FILE 'STNGUIDE' ENTERED AT 10:09:27 ON 25 OCT 2006
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     FILE 'CAPLUS' ENTERED AT 10:10:48 ON 25 OCT 2006
               ACT GIT659CAAU/A
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L34(       126)SEA FILE=CAPLUS ABB=ON  RAMSAY C?/AU
L35(       833)SEA FILE=CAPLUS ABB=ON  SIMPSON W?/AU
L36           2 SEA ABB=ON  L34 AND L35
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               ACT GIT659CA1/A
               ---------
L37(     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L38(        99)SEA FILE=CAPLUS ABB=ON  L37(L)HYDROPHILIC/OBI
L39(       164)SEA FILE=CAPLUS ABB=ON  L37(L)HYDROPHOBIC/OBI
L40(        43)SEA FILE=CAPLUS ABB=ON  L38 AND L39
L41(    753213)SEA FILE=CAPLUS ABB=ON  9/SC,SX
L42           9 SEA ABB=ON  L40 AND L41
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               ACT GIT659CA2/A
               ---------
L43(     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L44(        99)SEA FILE=CAPLUS ABB=ON  L43(L)HYDROPHILIC/OBI
L45(       164)SEA FILE=CAPLUS ABB=ON  L43(L)HYDROPHOBIC/OBI
L46(        43)SEA FILE=CAPLUS ABB=ON  L44 AND L45
L47(    293644)SEA FILE=CAPLUS ABB=ON  APPARATUS/CW
L48           5 SEA ABB=ON  L46 AND L47
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               ACT GIT659CA3/A
               ---------
L49(     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L50(        99)SEA FILE=CAPLUS ABB=ON  L49(L)HYDROPHILIC/OBI
L51(       164)SEA FILE=CAPLUS ABB=ON  L49(L)HYDROPHOBIC/OBI
L52(        43)SEA FILE=CAPLUS ABB=ON  L50 AND L51
L53           6 SEA ABB=ON  DEV/RL AND L52
               ---------
               ACT GIT659CA4/A
               ---------
L54(     46576)SEA FILE=CAPLUS ABB=ON  SURFACE/CT
L55(        99)SEA FILE=CAPLUS ABB=ON  L54(L)HYDROPHILIC/OBI
L56(       164)SEA FILE=CAPLUS ABB=ON  L54(L)HYDROPHOBIC/OBI
L57(        43)SEA FILE=CAPLUS ABB=ON  L55 AND L56
L58           7 SEA ABB=ON  L57 AND ANST/RL
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     FILE 'WPIX' ENTERED AT 10:10:54 ON 25 OCT 2006
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L59(        16)SEA FILE=WPIX ABB=ON  RAMSAY C?/AU
L60(       160)SEA FILE=WPIX ABB=ON  SIMPSON W?/AU
L61           2 SEA ABB=ON  L59 AND L60
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               ACT GIT659WPI1/A
               ---------
L62(      5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L63(      4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L64(     49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR C11-C09
L65(     30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L66(     35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
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L67          10 SEA ABB=ON  L62 AND L63 AND L64 AND (L65 OR L66)
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                 ACT GIT659WPI2/A
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L68(       5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L69(       4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L70(      49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR C11-C09
L71(      30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L72(      35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L73(         66)SEA FILE=WPIX ABB=ON  L68 AND L69 AND (L70 OR L71 OR L72)
L74(     453199)SEA FILE=WPIX ABB=ON  ALUMINUM/BI,ABEX OR ALUMINIUM/BI,ABEX
L75            4 SEA ABB=ON  L73 AND L74
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L76(       5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L77(       4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L78(      49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR C11-C09
L79(      30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L80(      35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L81(         66)SEA FILE=WPIX ABB=ON  L76 AND L77 AND (L78 OR L79 OR L80)
L82(      74012)SEA FILE=WPIX ABB=ON  QUAT?/BI,ABEX(2A)AMMONIUM/BI,ABEX OR BENZ
L83            1 SEA ABB=ON  L81 AND L82
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                 ACT GIT659WPI4/A
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L84(       5602)SEA FILE=WPIX ABB=ON  HYDROPHILIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L85(       4016)SEA FILE=WPIX ABB=ON  HYDROPHOBIC/BI,ABEX (3A)SURFACE#/BI,ABEX
L86(       2367)SEA FILE=WPIX ABB=ON  SWAB?/BI,ABEX
L87(      10860)SEA FILE=WPIX ABB=ON  POUCH/BI,ABEX
L88            2 SEA ABB=ON  L84 AND L85 AND (L87 OR L86)
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                 ACT GIT659WPI5/A
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L89(      49610)SEA FILE=WPIX ABB=ON  (B11-C08 OR C11-C08 OR B11-C09 OR C11-C09
L90(      30055)SEA FILE=WPIX ABB=ON  B12-K04F/MC OR C12-K04F/MC
L91(      35651)SEA FILE=WPIX ABB=ON  S03-E14H/MC
L92(      10860)SEA FILE=WPIX ABB=ON  POUCH/BI,ABEX
L93(    1034621)SEA FILE=WPIX ABB=ON  (FIRST/BI,ABEX (P) SECOND/BI,ABEX) OR (1S
L94(    4150809)SEA FILE=WPIX ABB=ON  DEVICE#/BI,ABEX OR APPARATUS/BI,ABEX
L95(        438)SEA FILE=WPIX ABB=ON  L93 AND L94 AND L92
L96            2 SEA ABB=ON  L95 AND L89 AND (L90 OR L91)
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     FILE 'STNGUIDE' ENTERED AT 10:11:05 ON 25 OCT 2006

     FILE 'CAPLUS' ENTERED AT 10:14:08 ON 25 OCT 2006
                D QUE L36

     FILE 'WPIX' ENTERED AT 10:14:09 ON 25 OCT 2006
                D QUE L61

     FILE 'JICST-EPLUS, BIOTECHNO, BIOSIS, JAPIO, BIOENG, CEABA-VTB' ENTERED
     AT 10:14:09 ON 25 OCT 2006
                D QUE L18

     FILE 'CAPLUS, BIOTECHNO, BIOSIS, WPIX' ENTERED AT 10:14:19 ON 25 OCT 2006
L97            3 DUP REM L36 L18 L61 (3 DUPLICATES REMOVED)
                      ANSWERS '1-2' FROM FILE CAPLUS
                      ANSWER '3' FROM FILE WPIX
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                D QUE L42
                D QUE L48
                D QUE L53
                D QUE L58
L98           10 SEA ABB=ON  (L42 OR L48 OR L53 OR L58) NOT L36

     FILE 'WPIX' ENTERED AT 10:16:05 ON 25 OCT 2006
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                D QUE L75
                D QUE L83
                D QUE L88
                D QUE L96
L99           12 SEA ABB=ON  (L67 OR L75 OR L83 OR L88 OR L96) NOT L61

     FILE 'JICST-EPLUS, BIOTECHNO, BIOSIS, JAPIO, BIOENG, CEABA-VTB' ENTERED
     AT 10:16:09 ON 25 OCT 2006
                D QUE L20
                D QUE L22
                D QUE L32
                D QUE L23
L100           9 SEA ABB=ON  (L20 OR L23) NOT L18

     FILE 'STNGUIDE' ENTERED AT 10:16:23 ON 25 OCT 2006

     FILE 'CAPLUS, WPIX, JICST-EPLUS, BIOSIS, JAPIO, BIOENG' ENTERED AT
     10:16:36 ON 25 OCT 2006
L101          30 DUP REM L98 L99 L100 (1 DUPLICATE REMOVED)
                     ANSWERS '1-10' FROM FILE CAPLUS
                     ANSWERS '11-22' FROM FILE WPIX
                     ANSWER '23' FROM FILE JICST-EPLUS
                     ANSWERS '24-28' FROM FILE BIOSIS
                     ANSWERS '29-30' FROM FILE JAPIO
                D IBIB ED ABS HITIND 1-10
                D IALL ABEQ TECH 11-22
                D IALL 23-30

     FILE 'HOME' ENTERED AT 10:17:23 ON 25 OCT 2006

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